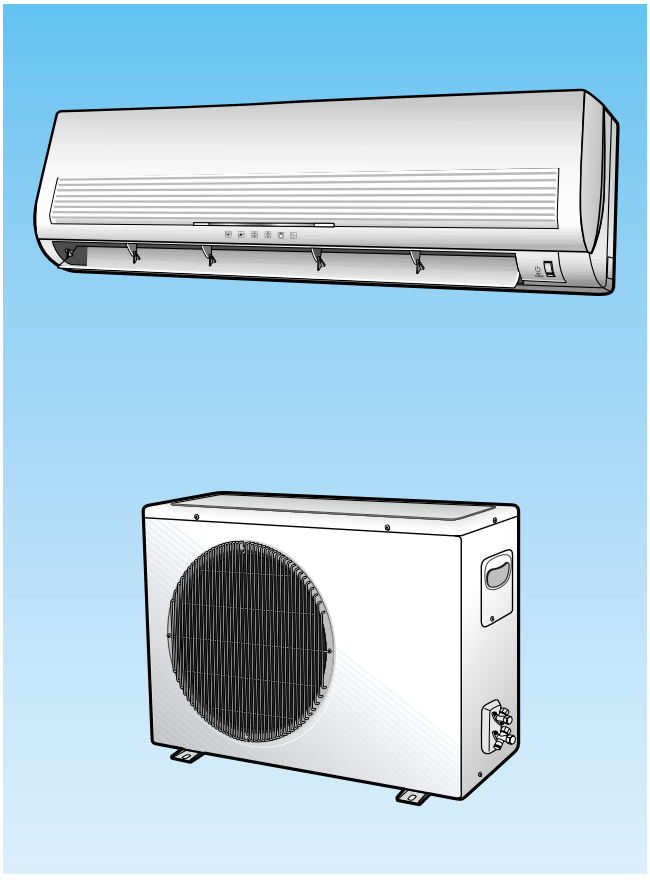
SAMSUNG

ROOM AIR CONDITIONER

INDOOR UNIT	OUTDOOR UNIT
ASA07C5(6)ME	USA07C5(6)ME
SC07AC5(6)	SC07AC5(6)X
ASA09CA(B)ME	USA09CA(B)ME
SC09ACA(B)	SC09ACA(B)X
ASA12CA(B)ME	USA12CA(B)ME
SC12ACA(B)	SC12ACA(B)X

SERVICE *Manual*

AIR CONDITIONER



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1. Precautions

1. Warning: Prior to repair, disconnect the power cord from the circuit breaker.

2. Use proper parts: Use only exact replacement parts. (Also, we recommend replacing parts rather than repairing them.)

3. Use the proper tools: Use the proper tools and test equipment, and know how to use them. Using defective tools or test equipment may cause problems later-intermittent contact, for example.

4. Power Cord: Prior to repair, check the power cord and replace it if necessary.

5. Avoid using an extension cord, and avoid tapping into a power cord. This practice may result in malfunction or fire.

6. After completing repairs and reassembly, check the insulation resistance.
   Procedure: Prior to applying power, measure the resistance between the power cord and the ground terminal. The resistance must be greater than 30 megaohms.

7. Make sure that the grounds are adequate.

8. Make sure that the installation conditions are satisfactory.
   Relocate the unit if necessary.

9. Keep children away from the unit while it is being repaired.

10. Be sure to clean the unit and its surrounding area.

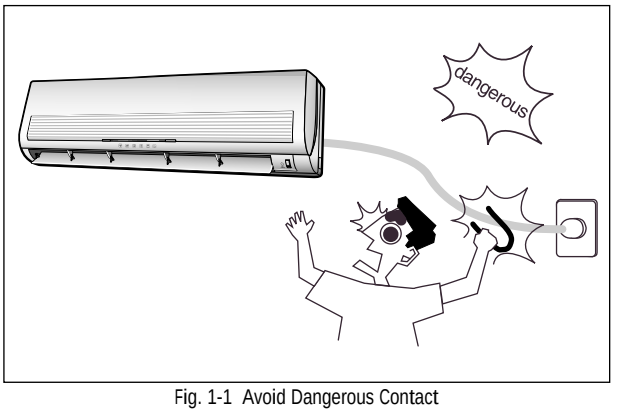


Fig. 1-1 Avoid Dangerous Contact

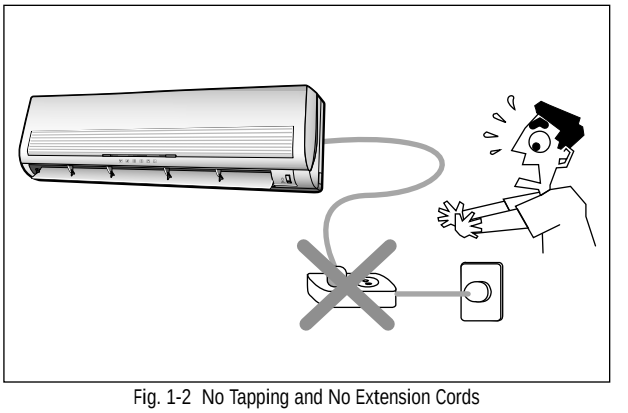


Fig. 1-2 No Tapping and No Extension Cords

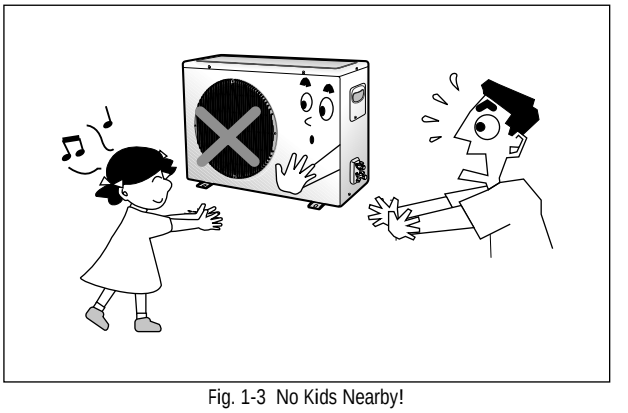


Fig. 1-3 No Kids Nearby!

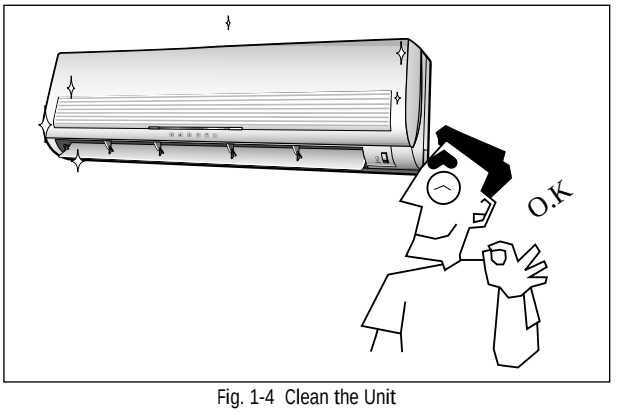


Fig. 1-4 Clean the Unit

MEMO

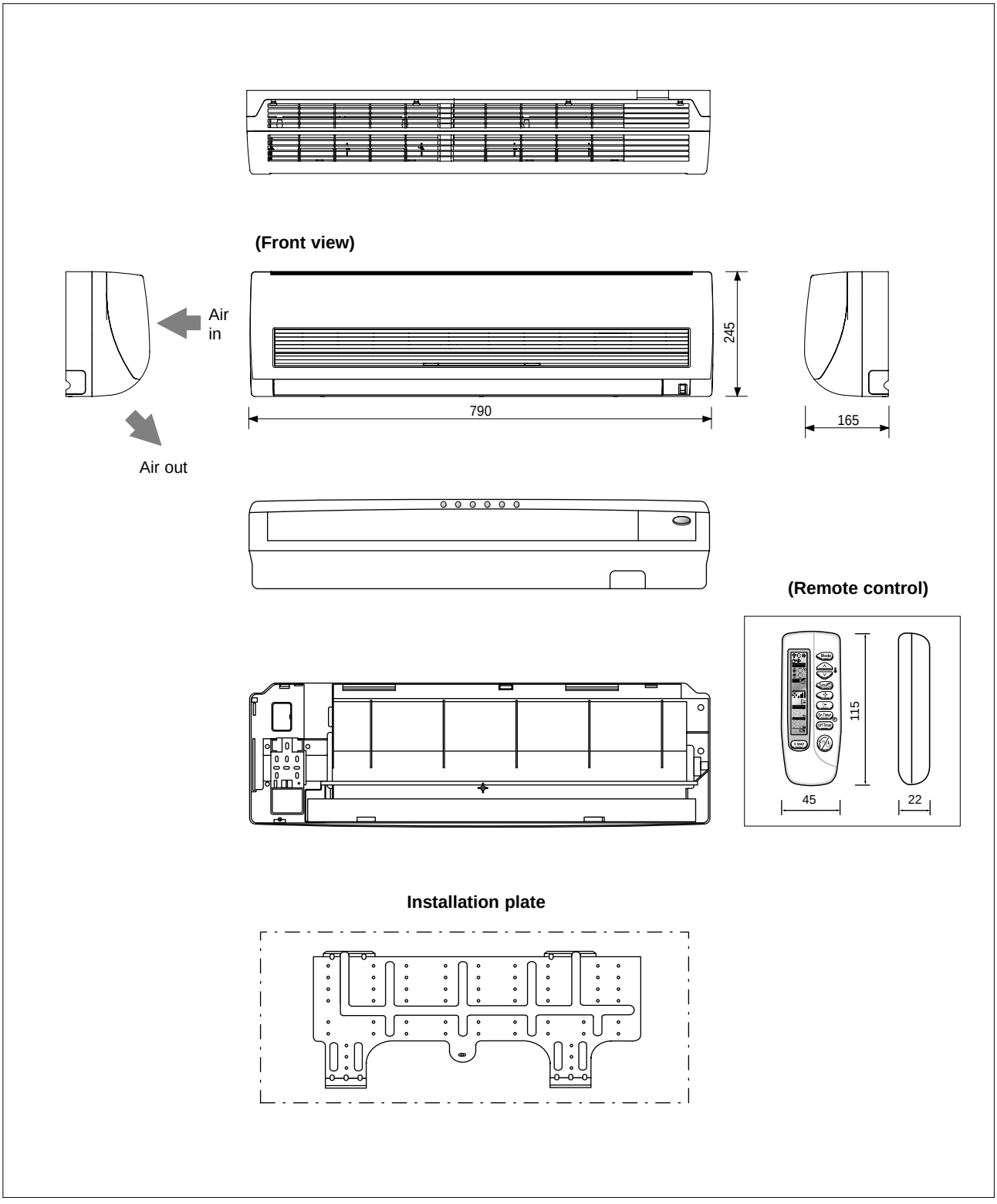
2. Product Specifications

2-1 Table

Item				Model	ASA07C5(6)ME SC07AC5(6)		ASA09CA(B)ME SC09ACA(B)		ASA12CA(B)ME SC12ACA(B)	
					Indoor unit	Outdoor unit	Indoor unit	Outdoor unit	Indoor unit	Outdoor unit
Type					Wall-mounting		Wall-mounting		Wall-mounting	
Perfor-mance	Cooling			KW	2.34		2.83		3.50	
	Dehumidifying			ℓ/h	0.9		1.2		1.5	
	Air volume	Cooling		m^3/min	5.4	-	6.7	-	8.0	-
	Noise	Cooling		dB	35	50	38	51	41	53
	Energy Efficiency ratio	Cooling		KW/KW	3.00		3.04		2.92	
	Power			ø-V-Hz	1-220 / 240-50		1-220 / 240-50		1-220 / 240-50	
Power	Power Consumption	Cooling		W	780		930		1200	
	Operating Current	Cooling		A	3.5		4.1		5.4	
	Power factor	Cooling		%	97.3		97.0		97.0	
	Starting current			A	14.5		23		27	
	Power cord	Length		m	-	-	-	-	-	-
		Number of core wire			250V 10/16A		250V 10/16A		250V 10/16A	
	Fuse capacity			A	3.15	-	3.15	-	3.15	-
Size	Outer dimension	Width x Height x Depth		mm / inch	790x245x165 / 31.10x9.65x6.50	660x497x235 / 25.98x19.57x9.25	790x245x165 / 31.10x9.65x6.50	740x525x230 / 29.1x20.7x9.1	790x245x165 / 31.10x9.65x6.50	740x525x230 / 29.1x20.7x9.1
	Weight			kg	7.7	27	7.7	30.5	7.7	33.5
	Refrigerant pipe	Liquid		OD(mm) x L(m)	ø6.35 x 5		ø6.35 x 5		ø6.35 x 5	
		Gas		OD(mm) x L(m)	ø9.52 x 5		ø9.52 x 5		ø9.52 x 5	
	Drain hose			ID(mm)x L(m)	ø17 x 2		ø17 x 2		ø17 x 2	
	Compressor	Type			-	Rotary	-	Rotary	-	Rotary
		Motor	Type		-	-	-	-	-	-
			Rated output	W	-	849	-	1010	-	1300
	Blower	Type			Cross-fan	Propeller	Cross-fan	Propeller	Cross-fan	Propeller
		Motor	Type		Resin	Steel	Resin	Steel	Resin	Steel
			Rated output	W	15	25	15	25	15	25
Heat exchanger					2Row 12Step	1Row 22Step	2Row 12Step	1Row 24Step	2Row 12Step	2Row 24Step
Refrigerant control unit					Capillary tube		Capillary tube		Capillary tube	
Freezer oil capacity					280		280		500	
Refrigerant to charge(R-410A)					490		540		930	
Protection device					-	RAC12126 -9622	-	RAC12131 -9622	-	RAC12128 -9622
Cooling test condition					Indoor unit : DB27˚C WB19˚C		Outdoor unit : DB35˚C WB24˚C			
Maximum operation Condition					Indoor unit : DB32˚C WB23˚C		Outdoor unit : DB43˚C WB26˚C			

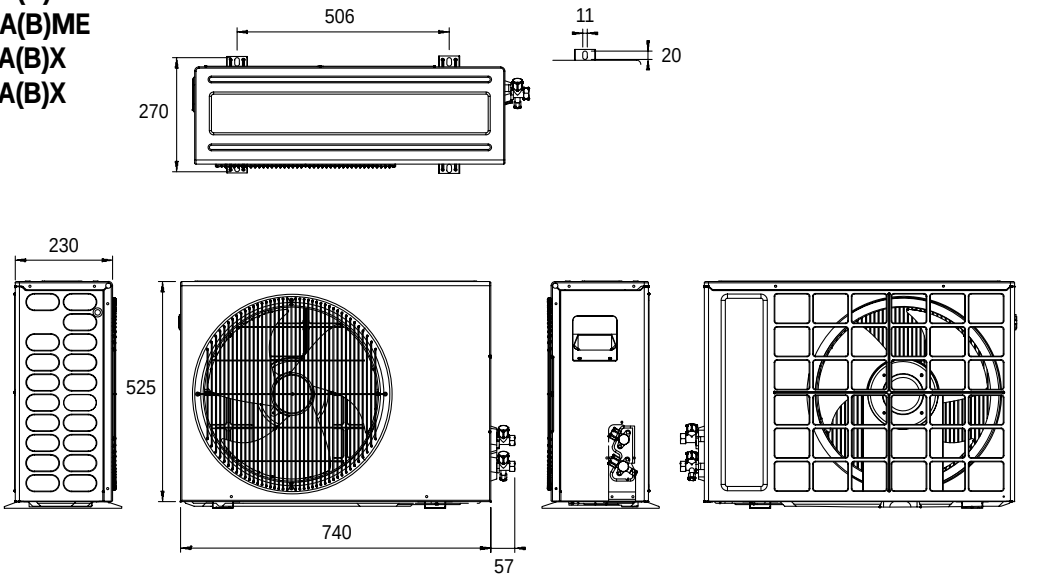
2-2 Dimensions

2-2-1 Indoor Unit

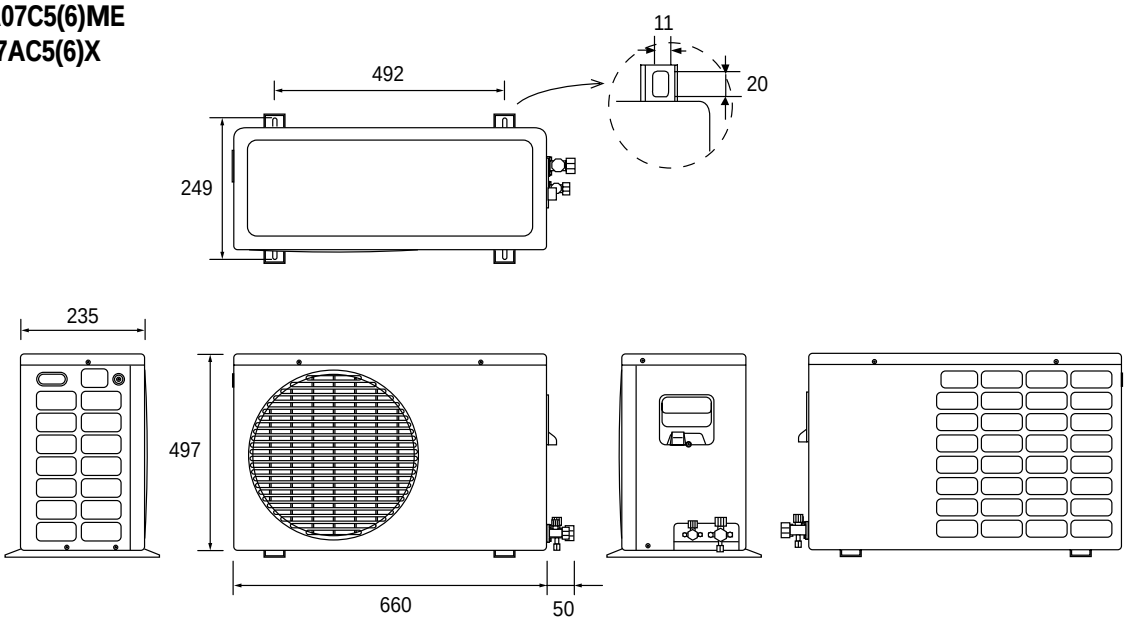


2-2-2 Outdoor Unit

USA12CA(B)ME
USA09CA(B)ME
SC12ACA(B)X
SC09ACA(B)X

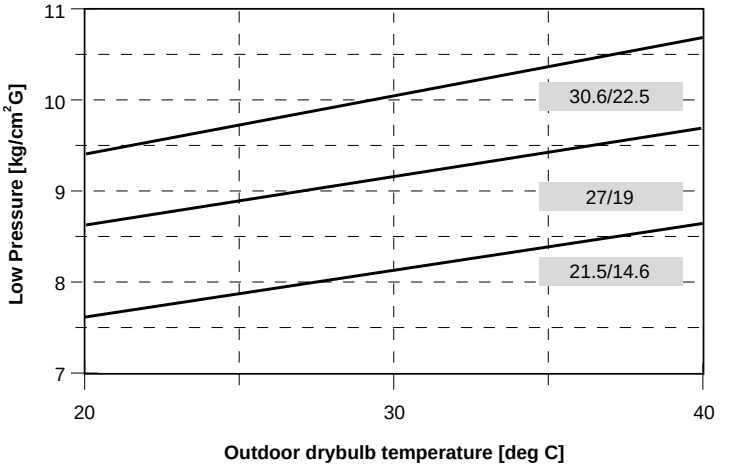


USA07C5(6)ME
SC07AC5(6)X

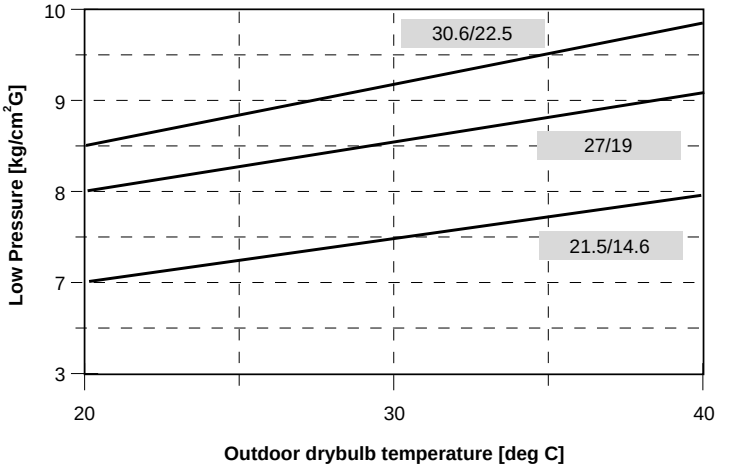


2-3 Pressure Graph

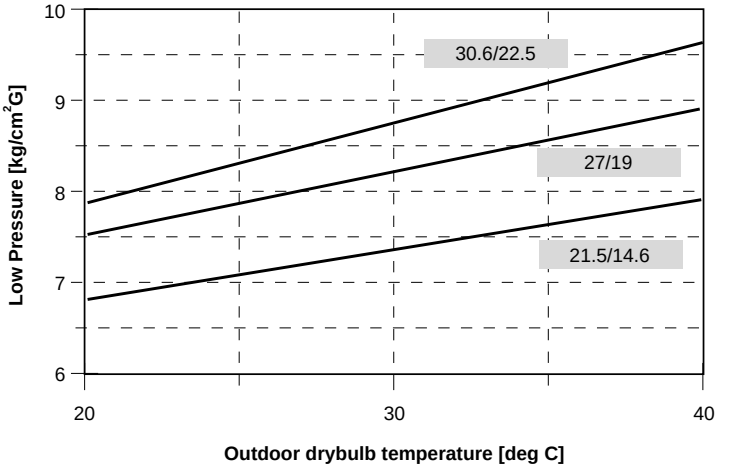
■ **ASA07C5(6)ME**
SC07AC5(6)



■ **ASA09CA(B)ME**
SC09ACA(B)



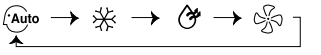
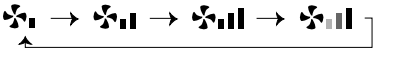
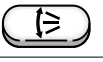
■ **ASA12CA(B)ME**
SC12ACA(B)



3. Operating Instructions and Installation

3-1 Operating Instructions

3-1-1 The Feature of Key in remote controller

NO	NAMED OF KEY	FUNCTION OF KEY
1		Power On/Off button to start and stop airconditioner or timer set up.
2	(UP)	Temp. up button. To increase the temperature by the pressing the temperature button.
	(DOWN)	Temp. down button. To decrease the temperature by the pressing the temperature button.
3		Each time you press this button Mode is changed in the following order  : Auto Mode : Fan Only : Cool Mode : Dry Mode
4		Press TURBO until the appearance. the air condition cools or heats the room as quickly as possible. after 30minutes, the air, the airconditioner is reset automatically to the previous mode.
		Press until the appearance. the sleep timer can be used when you are cooling or heating your room to switch the air conditioner off automatically after a period of six hours.
5		Each time you press this button, FAN SPEED is changed in the following order. 
6		Adjust air flow vertically.
7		The ON Timer enables you to **switch on** the air conditioner automatically after a given period of time that is from 30 minutes to 24 hours. To cancel, press the (Set/Cancel) button.
8		The Off Timer enables you to **switch off** the air conditioner automatically after a given period of time that is from 30 minutes to 24 hours. To cance, press the (Set/Cancel) button.
9		To select the 5 way function with the remote control, press the 5 way button one or more times until the desired mode is selected. Each time you press the 5 way button. Each 5 way indicator on the indoor unit comes on in order.

3-1-2 Name & Function of Key in remote controller

1. AUTO MODE : In this mode, operation mode(COOL) is selected automatically by the room temperature of initial operation.

Operation Type	Room Temp	
Cool Operation	Tr≥ 25°C+ΔT	Compressor ON
	Tr< 24°C+ΔT	Compressor OFF

   ΔT= -1°C, -2°C, 0°C+1°C+2°C
   ΔT is controlled by setting temperature up/down key of remote controller
   *FAN SPEED : AUTO

2. COOL MODE : The unit operates according to the difference between the setting and room temperature. (18°C~30°C)

3. DRY MODE : Has 3 states, each determined by room temperature.
   The unit operates in DRY mode.
   *Compressor ON/OFF Time is controlled compulsorily(can not set up the fan speed, always breeze).
   *Protective function : Low temperature release. (Prevention against freeze)

4. TURBO MODE : This mode is available in AUTO, COOL, DRY, FAN MODE.
   When this button is pressed at first, the air conditioner is operated "powerful" state for 30 minutes regardless of the set temperature, room temperature.
   When this button is pressed again, or when the operating time is 30 minutes, turbo operation mode is canceled and returned to the previous mode.
   *But, if you press the TURBO button in DRY or FAN mode that is changed with AUTO mode automatically.

5. SLEEP MODE : Sleep mode is available only in COOL or mode.
   The operation will stop after 6 hours.
   *In COOL mode : The setting temperature is automatically raised by 1°C each 1hour When the temperature has been raised by total of 2°C, that temperature is maintained.

6. FAN SPEED : Manual (3 step), Auto (4 step)
   Fan speed automatically varies depending on both the difference between setting and the room temperature.

7. COMPULSORY OPERATION :
   For operating the air conditioner without the remote controller.
   *AUTO : The operating is the same function that AUTO MODE in the remote controller. And each time you press the button the 5WAY function is changed as follow.
   STD → NATURE → POWER → SAVING → SILENCE → POWER OFF
   ❊ STD(standard)( ) : General operation Mode
   ❊ NATURE( ) : The unit is operated according to health pattern control
   ❊ POWER( ) : The unit is operated in powerful state
   ❊ SAVING( ) : The unit is operated in power saving state
   ❊ SILENCE( ) : The unit is operated quitely
   Each mode has Auto, Cool and SLEEP operation designed in advance.

8. SWING : BLADE-H is rotated vertically by the stepping motor.
   *Swing Set : Press the button under the remote control is displayed on LCD the and the blades move up and down. If the one more time press the button, blades location is stop.

9. 24-Hour ON/OFF Real Setting Timer. : The air conditioner is turned ON at a specified time using .
   OFF TIMER : The air Conditioner is turned OFF at a specified time using .
   *ON TIMER : Only timer LED lights on.
   *OFF TIMER : Both timer and operation LED lights on.

10. SELF Diagnosis

Check Point	LED DISPLAY					
	TIMER	STD	NATURE	POWER	SAVING	SILENCE
Indoor unit room temperature sensor error(open or short)	◑	○	○	○	○	○
Indoor unit heat exchanger temperature sensor error(open or short)	◑	◑	○	○	○	○
Indoor fan mal function	○	○	◑	○	○	○
EEPROM error	◑	◑	◑	○	○	○
Option error(option wasn't set up or option data error)	◑	◑	◑	◑	◑	◑

◑ : LED blinking ○ : LED off

11. BUZZER SOUND : Whenever the ON/OFF button is pressed or whenever change occurs to the condition which is set up or select, the compulsory operation mode, buzzer is sounded "beep".

3-2 Installation

3-2-1 Selecting Area for Installation

Select an area for installation that is suitable to the customer's needs.

3-2-1(a) Indoor Unit

1. Make sure that you install the indoor unit in an area providing good ventilation. It must not be blocked by an obstacle affecting the airflow near the air inlet and the air outlet.
2. Make sure that you install the indoor unit in an area allowing good air handling and endurance of vibration of the indoor unit.
3. Make sure that you install the indoor unit in an area where there is no source of heat or vapor nearby.
4. Make sure that you install the indoor unit in an area from which hot or cool air is spread evenly in a room.
5. Make sure that you install the indoor unit in an area away from TVs, audio units, cordless phones, fluorescent lighting fixtures and other electrical appliances (at least 1 meter).
6. Make sure that you install the indoor unit in an area which provides easy pipe connection with the outdoor unit, and easy drainage for condensed water.
7. Make sure that you install the indoor unit in an area which is large enough to accomodate the measurements shown in figure on the next page.

3-2-1(b) Outdoor Unit

1. Make sure that you install the outdoor unit in area not exposed to the rain or direct sun light.
   (Install a separate sunblind if exposed to direct sun light.)
2. Make sure that you install the outdoor unit in area allowing good air moment, not amplifying noise or vibration, especially to avoid disturbing neighbours.
   (Fix the unit firmly if it is mounted in a high place.)
3. Make sure that you install the outdoor unit in area providing good ventilation and which is not dusty. It must not be blocked by any obstacle affecting the airflow near the air inlet and the air outlet.
4. Make sure that you install the outdoor unit in area free from animals or plants.
5. Make sure that you install the outdoor unit in area not blocking the traffic.
6. Make sure that you install the outdoor unit in area easy to drain condensed water from the indoor unit.
7. Make sure that you install the outdoor unit in area which provides easy connection within the maximum allowable length of a coolant pipe(10 meters).

Note

1. Add 20 grams of refrigerant (R410A) for every 1 meter if the pipe length exceeds the standard pipe length of 5 meters.
2. Maintain a height between the indoor and outdoor units of less than 3 meters.

8. Make sure that you install the outdoor unit in an area which is large enough to accommodate the measurements shown in figure on the next page.

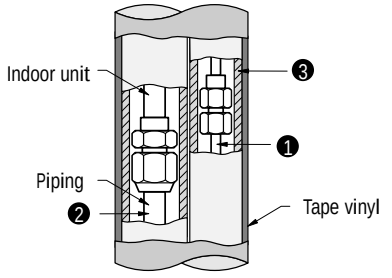
3-2-1(c) Remote Control Unit

1. Make sure that you install the remote control unit in an area free from obstacles such as curtains etc, which may block signals from the remote control unit.
2. Make sure that you install the remote control unit in an area not exposed to direct sunlight, and where there is no source of heat.
3. Make sure that you install the remote control unit in an area away from TVs, audio units, cordless phones, fluorescent lighting fixtures and other electrical appliances (at least 1 meter).

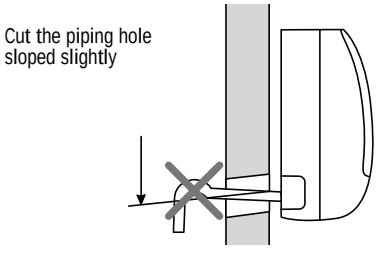
Caution :
It is harmful to the air conditioner if it is used in the following environments: greasy areas (including areas near machines), salty areas such as coast areas, areas where sulfuric gas is present such as hot spring areas. Contact your dealer for advice.

3-2-2 Installation diagram of indoor unit and outdoor unit

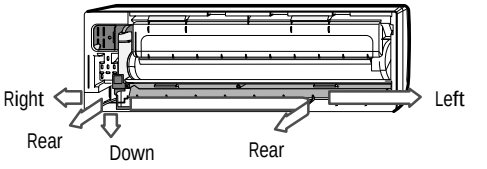
A Indoor unit gas leak test check point

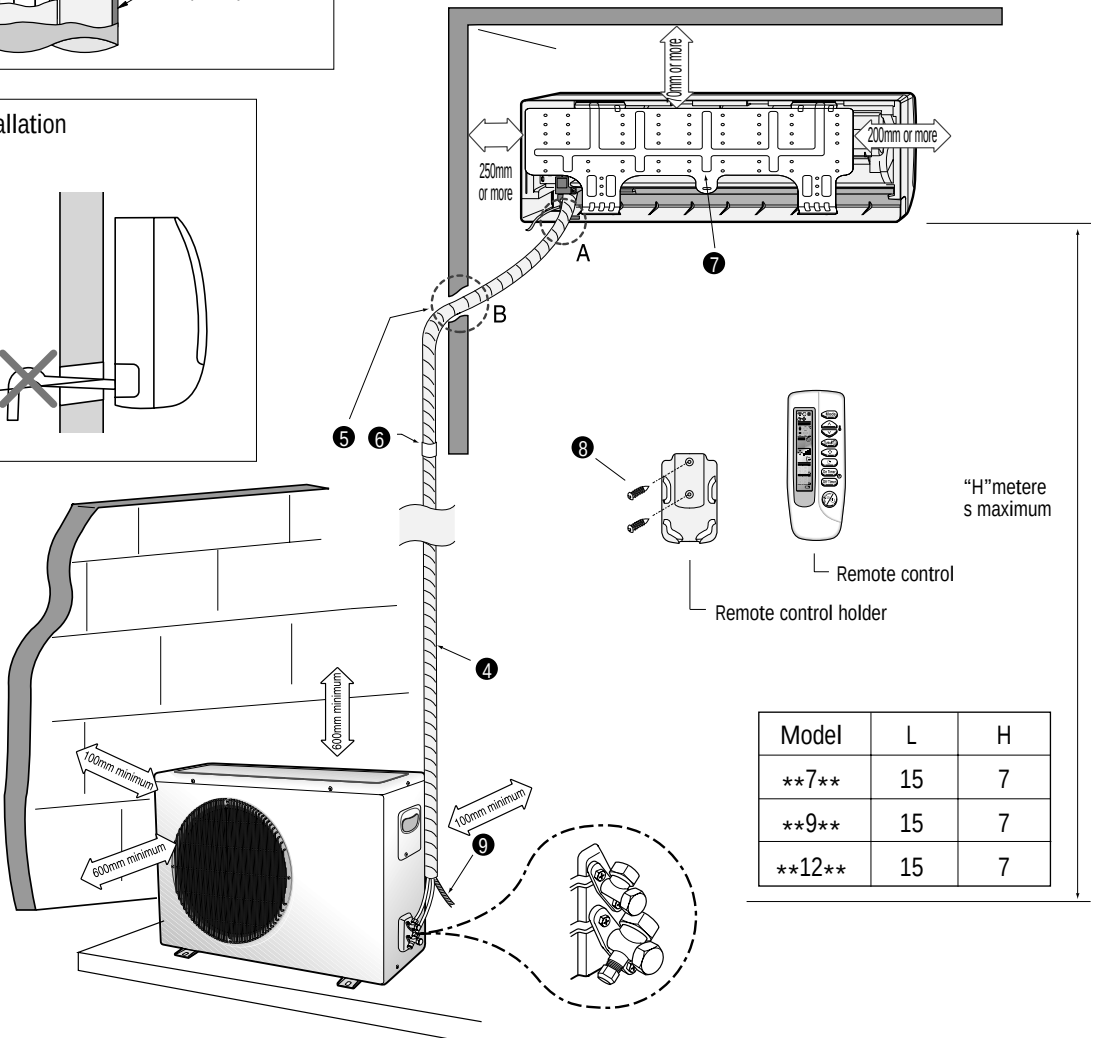


B Drain hose installation



Piping may be laid to the rear, left, right or down .

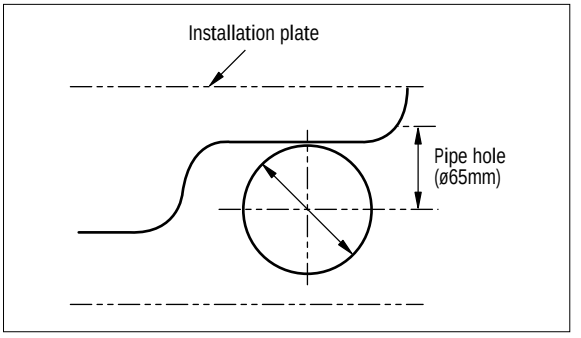




Model	L	H
7	15	7
9	15	7
12	15	7

❶	Piping (Liquid) 1/4"		❺	Putty
❷	7K/9K BTU 12K BTU	Piping(Gas)3/8"	❻	Clamper tube
			❼	Installation plate
❸	Installation tube		❽	Screw
❹	Vinyl tape		❾	Drain hose

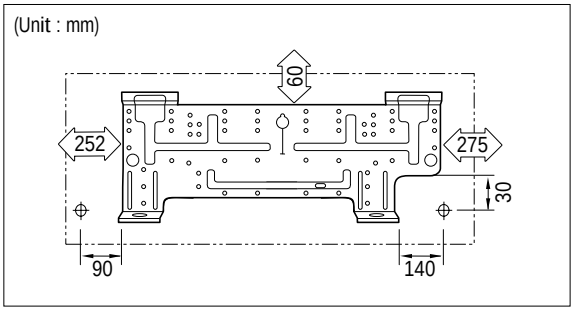
3-2-2(a) Fixing the Installation Plate



1. Determine the position of the pipe and drain hose hole using the right figure and drill the hole with an inner diameter of 65mm so that it slants slightly downwards.

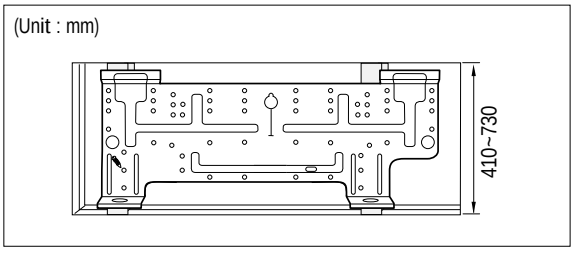
2. **If you are fixing the indoor unit to a… Then follow Steps…**

Wall	**3.**
Window frame	**4 to 6.**



3. Fix the installation plate to the wall in a manner appropriate to the weight of the indoor unit.

   If you are mounting the plate on a concrete wall with anchor bolts, the anchor bolts must not project by more than 20mm.

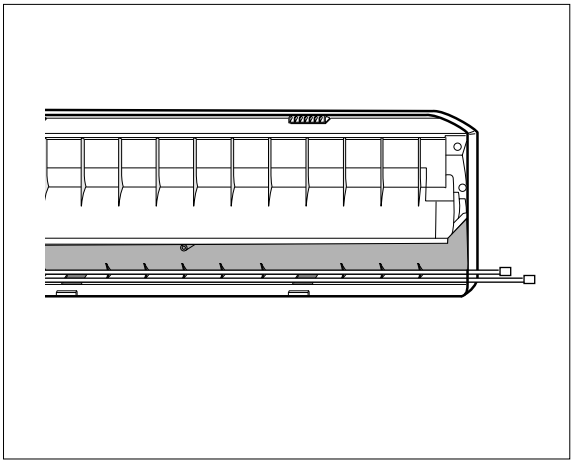


4. Determine the positions of the wooden uprights to be attached to the window frame.

5. Attach the wooden uprights to the window frame in a manner appropriate to the weight of the indoor unit.

6. Using tapped screws, attach the installation plate to the wooden uprights, as illustrated in the last figure opposite.

3-2-2(b) Purging the Unit



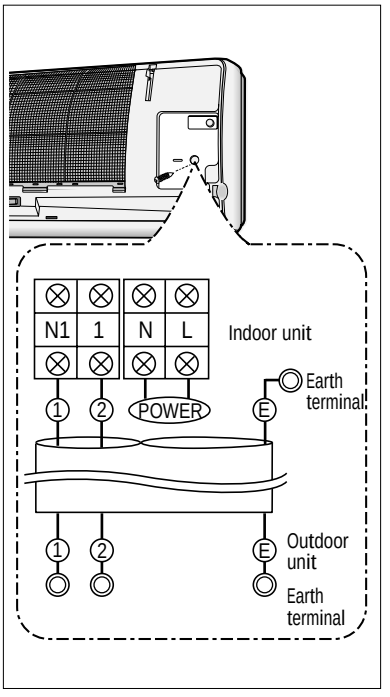
On delivery, the indoor unit is loaded with an inert gas. All this gas must therefore be purged before connecting the assembly piping. To purge the inert gas, proceed as follows.

Unscrew the caps at the end of each pipe.

Result : All inert gas escapes from the indoor unit.

- **To prevent dirt or foreign objects from getting into the pipes during installation, do NOT remove the caps completely until you are ready to connect the piping.**

3-2-2(c) Connecting the Assembly Cable.

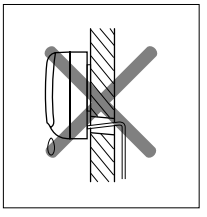


The outdoor unit is powered from the indoor unit via the assembly cable. If the outdoor unit is more than five metres away from the indoor unit, the cable must first be extended to a maximum of ten metres.

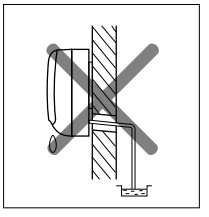
1. Extend the assembly cable if necessary.
2. Open the front grille by pulling on the tabs on the lower right and left sides of the indoor unit.
3. Remove the screw securing the connector cover.
4. Pass the assembly cable through the rear of the indoor unit and connect the assembly cable to terminals N1 to 1.
   - Each wire is labelled with the corresponding terminal number.
5. Firmly fix the ass'y cable with clamp wire holder.
6. Pass the other end of the cable through the 65mm hole in the wall.
7. Replace the connector cover, carefully tightening the screw.
8. Close the front grille.
9. For further details on how to plug the other end of the assembly cable into the outdoor unit, refer to page 3-8.

3-2-2(d) Installing and Connecting the Indoor Unit Drain Hose

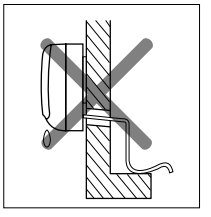
Care must be taken when installing the drain hose for the indoor unit to ensure that any condensation water is correctly drained outside. When passing the drain hose through the 65mm hole drilled in the wall, check that none of the following situations occur.



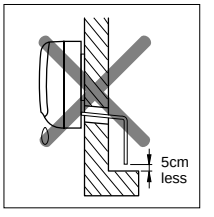
The hose must NOT slope upwards.



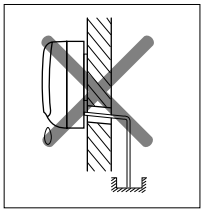
The end of the drain hose must NOT be placed in water.



Do NOT bend the hose in different directions.



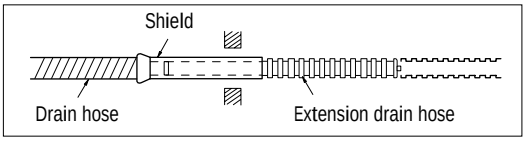
Keep a clearance of at least 5cm between the end of the hose and the ground.



Do NOT place the end of the drain hose in a hollow.

To install the drain hose, proceed as follows.

1. If necessary, connect the 2-metre extension to the drain hose.
2. If you are using the extension, insulate the inside part of the extension drain hose with a shield.
3. Pass the drain hose under the refrigerant piping, taking care to keep the drain hose tight.
4. Pass the drain hose through the hole in the wall, making sure that it is sloping downwards, as shown in the illustrations above.

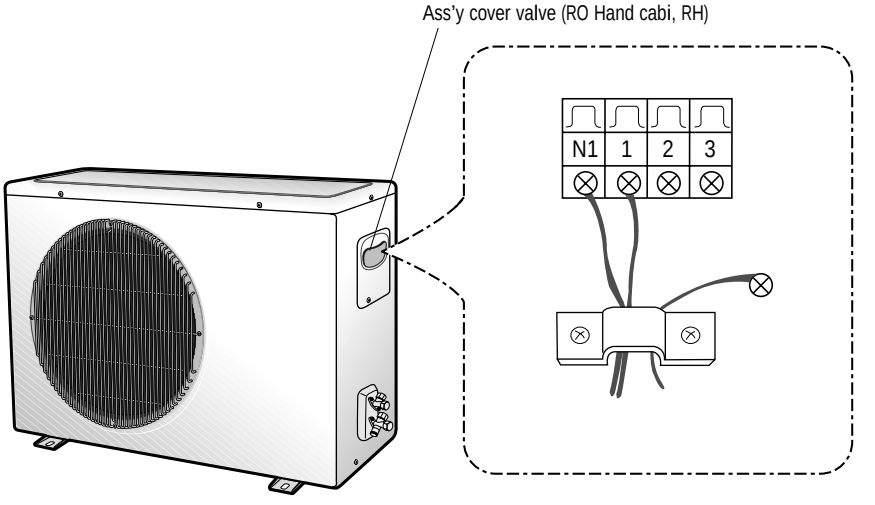


The hose will be fixed permanently into position once the whole installation has been tested for gas leaks;

3-2-2(e) Outdoor unit installation

Wiring connection

1. Remove the cover-E parts.
2. Firmly connect the cable connector in the terminal block.
3. Fasten the M4 ring terminal to the hole marked
4. Firmly fix the ass'y cable with clamp wire holder.
5. Assemble the cover-E parts.
6. To prevent the entry of water, form a trap of the ass'y cable as illustrated in the installation diagram of indoor and outdoor unit.



3-2-2(f) Air-Purge Procedure

1. Connect each assembly pipe to the appropriate valve on the outdoor unit and tighten the flare nut.

↓

2. Connect the charging hose of low pressure side of manifold gauge to the packed valve having a service port (3/8" Packed valve) as shown at the figure.

↓

3. Open the valve of the low pressure side of manifold gauge counter-clockwise.

↓

4. Purge the air from the system using vacuum pump for about 30 minutes.
   - After that, please recheck that pressure is staloilization.
   - Close the valve of the low pressure side of manifold gauge clockwise.
   - Remove the hose of the low pressure side of manifold gauge.

↓

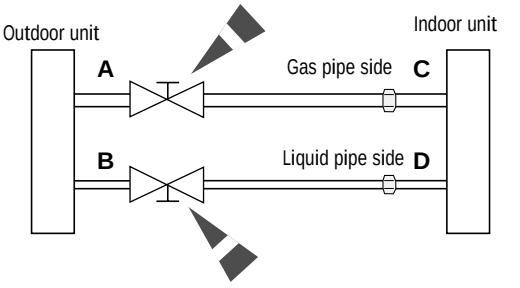
5. Set valve cork of both liquid side and gas side of packed valve to the open position.

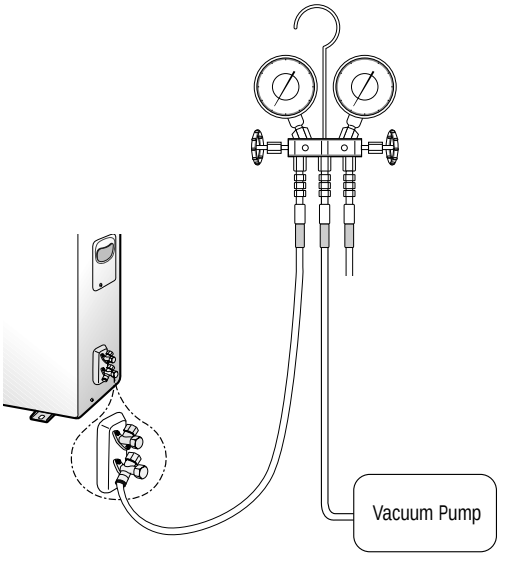
↓

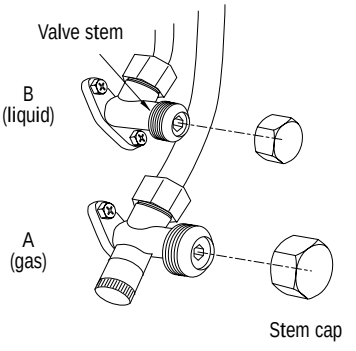
6. Mount the valve stem nuts to the 2-way and 3-way valve. And mount the service port cap to 3-way valve.

↓

7. Check for gas leakage.
   - At this time, especially check for gas leakage from the 3-way valve's stem nuts, and from the service port cap.



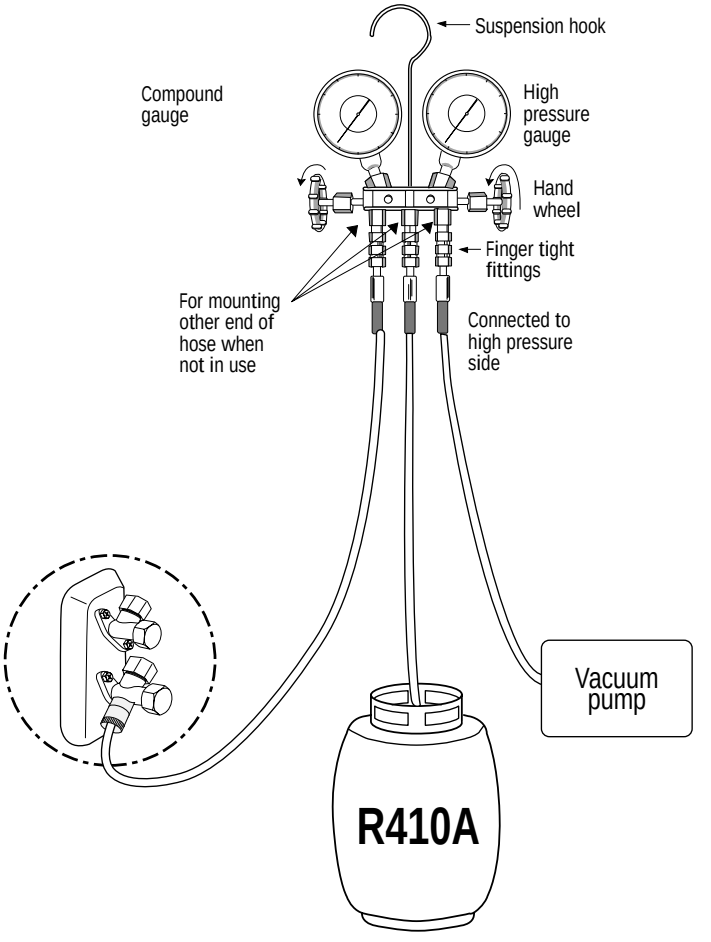




3-2-2(g) Refrigerant Refill

• Refill an air-conditioner with refrigerant when refrigerant has been leaked at installing or using.

1. Vacuum system with pump (for new installation, leakage).
↓
2. Turn the 3-way valve clockwise to close, connect the pressure gauge(low pressure side) to the service valve, and open the 3-way valve again.
↓
3. Connect the tank to refill with Refrigerant
↓
4. Set the unit to Low pressure checking mode.
   * Press the ON/OFF switch for 5 second.
   * All lamps blink on the indoor unit.
↓
5. Check the pressure indicated by the pressure gauge(low pressure side).
   * Refer to Low pressure graph.
↓
6. Open the refrigerant tank and fill with refrigerant until the rated pressure is reached.
   * It is recommended not to pour the refrigerant in too quickly, but gradually while operating a pressure valve.
↓
7. Stop operation of the air conditioner.
↓
8. Close the 3-way valve, disconnect the pressure gauge, and open the 3-way valve again.
↓
9. Close the cap of each valve.



3-2-2(h) Refrigerant Adjustment

Class	For installation		For service	
Connection Pipe Length	Air-Purge Method	Refrigerant Adjustment	Air-Purge Method	Refrigerant Quantity
5m Max.	Refer to the detailed Air-Purge Procedure	Unnecessary	Purge air using a vaccum pump	refer to specification sheet
5~10m		Add 20g of refrigerant R410A(Add as liquid state) for every 1m.		Add 20g of refrigerant R410A(Add as liquid state) for every 1m.

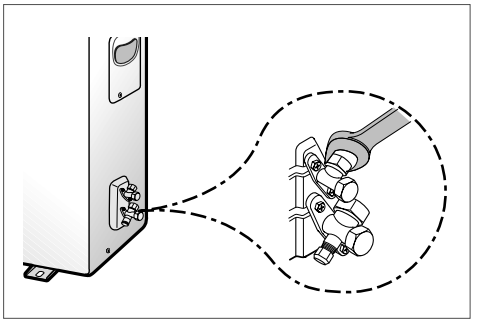
3-2-2(i) Flare nut fixing torque

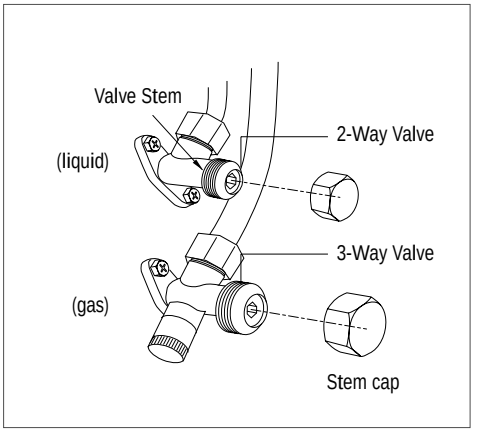
Outter diameter	Torque (kg-cm)	
	Fixing Torque	Final Torque
ø 6.35 (9000Btu, 12000Btu) (Liquid Side)	160	200
ø 9.52 (9000Btu) (Gas Side)	300	350
ø 12.7 (12000Btu) (Gas Side)	500	550

3-2-2(j) "Pump down" Procedure

- Pump down shall be carried out when an evaporator is replaced or when the unit is relocated in another area.

1. Remove the caps from the 2-way valve and the 3-way valve.
2. Turn the 3-way valve clockwise to close and connect a pressure gauge(low pressure side) to the service valve, and open the 3-way valve again.
3. Set the unit to cool operation mode. (Check if the compressor is operating.)
4. Turn the 2-way valve clockwise to close.
5. When the pressure gauge indicates "0" turn the 3-way valve clockwise to close.
6. Stop operation of the air conditioner.
7. Close the cap of each valve.





Relocation of the air conditioner

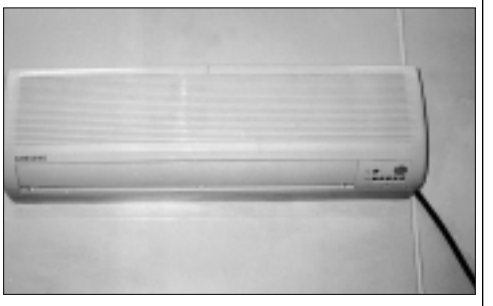
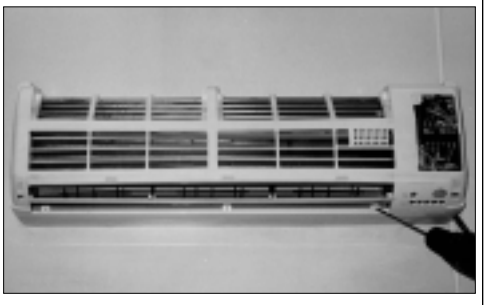
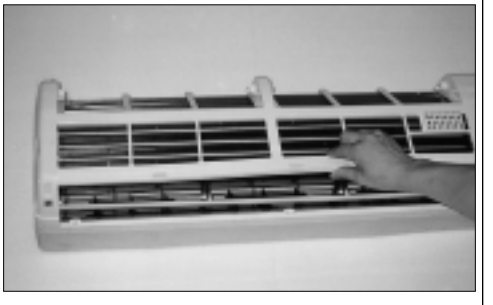
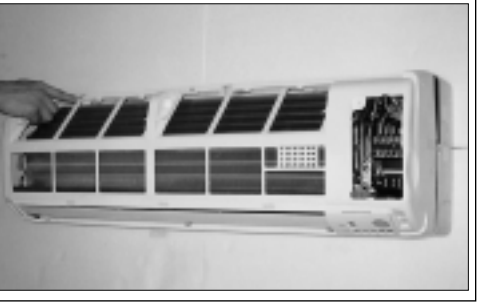
- Refer to this procedure when the unit is relocated.

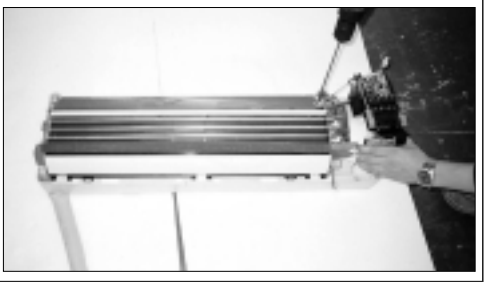
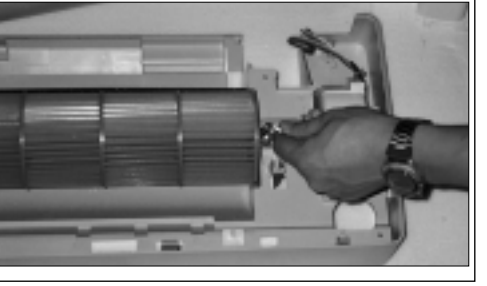
1. Carry out the pump down procedure (refer to the details of 'pump down').
2. Remove the power cord.
3. Disconnect the assembly cable from the indoor and outdoor units.
4. Remove the flare nut connecting the indoor unit and the pipe.
   At this time, cover the pipe of the indoor unit and the other pipe using a cap or vinyl plug to avoid foreign material entering.
5. Disconnect the pipe connected to the outdoor unit.
   At this time, cover the valve of the outdoor unit and the other pipe using a cap or vinyl plug to avoid foreign material entering.
6. Make sure you do not bend the connection pipes in the middle and store together with the cables.
7. Move the indoor and outdoor units to a new locatioon.
8. Remove the mounting plate for the indoor unit and move it to a new location.

4. Disassembly and Reassembly

Stop operation of the air conditioner and remove the power cord before repairing the unit.

4-1 Indoor Unit

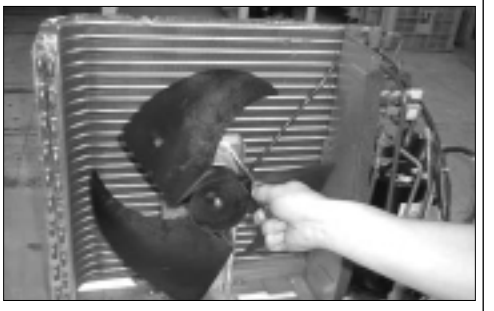
No	Parts	Procedure	Remark
1	Front Grille	1) Stop the air conditioner operation and block the main power. 2) Separate tape of front panel upper.	
		3) Contract the second finger to the left, and right handle and pull to open the inlet grille. 4) Take the left and right filter out. *Taking off the deodorizing filter. 5) Loosen one of the right fixing screw and separate the terminal cover. 6) Loosen three fixing screws of front grille.	
			
		7) Pull the upper left and right of discharge softly for the outside cover to be pulled out.	
		8) Pull softly the lower part of discharge and push it up. **Caution;** Assemble the front panel and fix the hooks of left and right.	

No	Parts	Procedure	Remark
2	Ass'y Tray Drain.	1) Do "1"above. 2) Take all the connector of PCB upper side out. (Inclusion Power cord) 3) Separate the outdoor unit connection wire from the terminal block. 4) If pulling the Main PCB up. it will be taken out.	
3	Electrical Parts (Main PCB)	1) Do "1", "2" above. Separate the drain hose from the extension drain hose. 2) Pull tray drain out from the back body.	
4	Heat Exchanger	1) Do "1" and "2", "3" above. 2) Loosen two fixing earth screws of right side. 3) Separate the connection pipe. 4) Separate the holder pipe at the rearside. 5) Loosen the three fixing screws of right and left side. 6) Lifting the heat exchanger up a little to push the up side for separation from the indoor unit.	
5	Fan Motor and Cross Fan	1) Do "1", "2", "3", "4" above. 2) Loosen the fixing two screws and separate the motor holder. 3) Loosen the fixing screw of fan motor. (By use of M3 wrench) 4) Separate the fan motor from the fan. 5) Separate the fan from the left holder bearing.	 

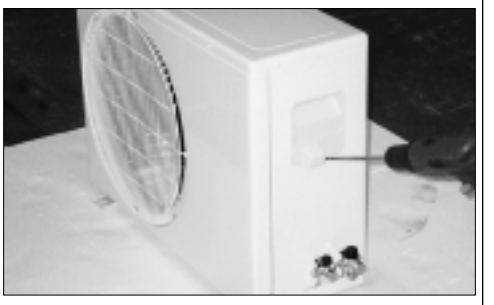
4-2 Outdoor Unit

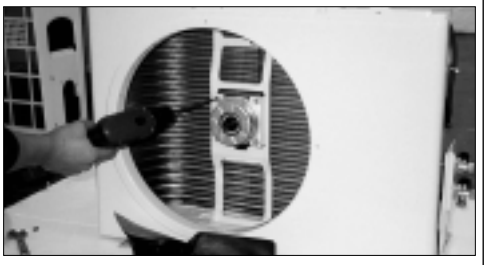
- **USA12A5ME / USA09A5ME**
  SC12AA5X / SC09AA5X

No	Parts	Procedure	Remark
1	Common Work	1) Loosen the fixing screw and separate the Handle-Cabi RH. 2) Separate the connection wire from the terminal block.	
		3) Loosen 6 fixing screws and separate the upper cabinet.	
		4) Loosen the fixing screw of Ass'y E-part.	
		5) Loosen 5 fixing screws and separate the side cabinet.	

No	Parts	Procedure	Remark
2	Fan and Motor	1) Do “1” above. 2) Remove the nut flange (Turn to the right to remove, as it is a left hand screw) 3) Separate the fan. 4) Loosen Four fixing screws to separate the motor. 5) Loosen two fixing screws and seperate the motor bracket from. the base.	 
3	Heat Exchanger	1) Do “1”,“2” above. 2) Loosen two fixing screws of left and right side. 3) Disassemble the inlet and outlet pipe by welding. 4) Separate the heat exchanger.	
4	Compressor	1) Do “1”, “2”, “3” above. 2) Open the terminal cover of compressor and unscrew the connection terminal. 3) Disassemble the inlet and outlet pipe of compressor by welding. 4) Loosen the three bolts of the lower part. 5) Separate the compressor.	

- **USA07A5ME**
  SC07AA5X

No	Parts	Procedure	Remark
1	Common Work	1) Loosen the fixing two screws and separate the cover E-parts. 2) Separate the connection wire from the terminal block.	
		3) Loosen five fixing screws and separate the cabi Upper.	
		4) Loosen two fixing screws of Ass'y E-part.	
		5) Loosen nine fixing screws and separate the cabi side.	
2	Fan and Motor	1) Do “1”, above. 2) Losen four serews and seperaate Guard Fan from front cabinet	

No	Parts	Procedure	Remark
		2) Remove the nut flange (Turn to the right to remove, as it is a left hand screw) 3) Separate the fan. 4) Loosen four fixing screws to separate the motor.	 
3	Heat Exchanger	1) Do “1”, 2 above. 2) Loosen two fixing screws of left and right side. 3) Disassemble the inlet and outlet pipe by welding. 4) Separate the heat exchanger.	
4	Compressor	1) Do “1”, above. 2) Loosen the nut on the terminal cover and open the terminal cover. 3) Disassemble the inlet and outlet pipe of compressor by welding. 4) Disassemble the inlet and outlet pipe of condenser by welding 5) Loosen the three bolts of the lower part. 6) Separate the compressor.	

5. Troubleshooting

5-1 Items to be checked first

1) The input voltage should be rating voltage ±10% range.
The airconditioner may not operate properly if the voltage is out of this range.

2) Is the link cable linking the indoor unit and the outdoor unit linked properly?
The indoor unit and the outdoor unit shall be linked by 3 cables.
Check the terminals if the indoor unit and outdoor unit are properly linked by the same number of cables.
Otherwise the airconditioner may not operate properly.

3) When a problem occurs due to the contents illustrated in the table below it is a symptom not related to the malfunction of the airconditioner.

NO	Operation of air conditioner	Explanation
1	The STD operation indication LED blinks when a power plug of the indoor unit is plugged in for the first time.	It indicates power is on. The LED stops blinking if the operation ON/OFF button on the remote control unit is pushed.
2	In a COOL operation mode, the compressor does not operate at a room temperature higher than the setting temperature that the IN DOOR FAN should operate.	In happens after a delay of 3 minutes when the compressor is reoperated. The same phenomenon occurs when a power is on. As a phenomenon that the compressor is reoperated after a delay of 3 minutes, the indoor fan is adjusted automatically with reference to a temperature of the air blew.
3	Fan speed setting is not allowed in AUTO or DRY mode.	The speed of the indoor fan is set to LL in DRY mode. Fan speed is 5 steps is selected automatically in AUTO mode.
4	Compressor stops operation intermittently in DRY mode.	Compressor operation is controlled automatically in DRY mode depending on the room temperature and humidity.
5	Timer LED only of the indoor unit lights up and the air conditioner does not operate.	Timer is being activated and the unit is in ready mode. The unit operates normally if the timer operation is cancelled.
6	The compressor stops intermittently in a COOL mode or DRY mode, and fan speed of the indoor unit decreases.	The compressor stops intermittently or the fan speed of the indoor unit decreases to prevent inside/outside air frozen depending on the inside/outside air temperature.

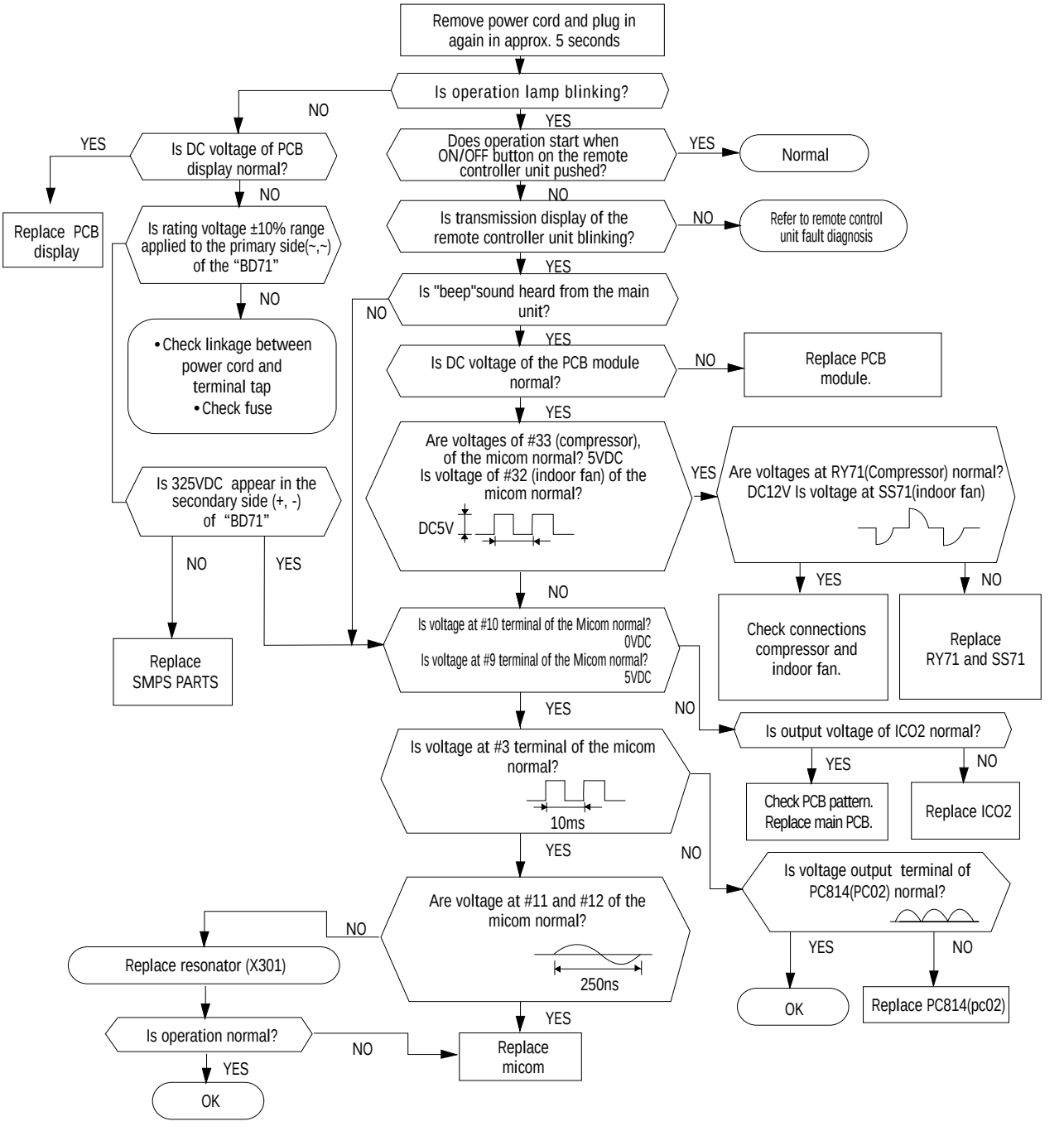
4) Indoor unit observes operation condition of the air conditioner, and displays self diagnosis details on the display panel.

NO	Display	Self Diagnosis
1	STD LED blinking (1Hz)	Restore from power failure (input initial power)
2	TIMER LED blinking (1Hz)	Indoor unit Room sensor Error (open or short)
3	STD and TIMER LED blinking (1Hz)	Indoor unit heat exchanger temperature sensor Error (open or short)
4	BIO LED blinking (1Hz)	Indoor fan malfunctioning (for spead is Below 450rpm)
5	STD, BIO and TIMER LED blinking(1HZ)	EEPROM Error
6	All LED blinking(1HZ)	Option Error (option wasn't setup or option data error)

5-2-1 No Power (completely dead)-Initial diagnosis

1) Checklist :
   (1) Is input voltage normal?
   (2) Is AC power linked correctly?
   (3) Is output voltage of DC regulator IC KA78L05 (IC02) normal? (4.5VDC-5.5VDC)

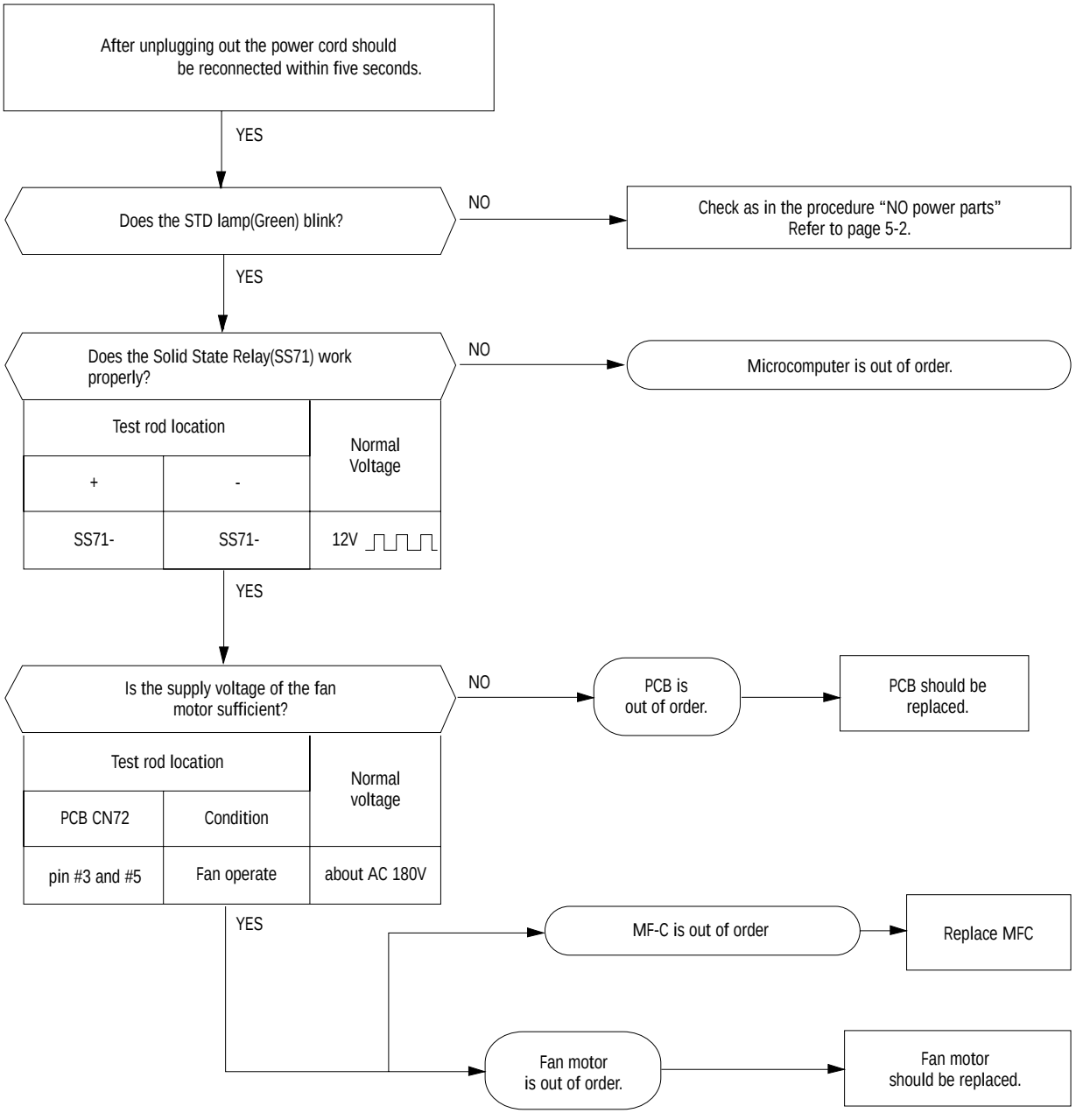
2) Troubleshooting procedure



5-2-2 When the Indoor Unit Fan Does Not Operate. (Initial Diagnosis)

1) Checklist :
   (1) Is the indoor unit fan motor properly connected with the connector (CN72)?
   (2) Is the AC voltage correct?
   (3) Is HALL IC in indoor fan motor properly connected with the connector (CN42)?
   (4) Is the running capacitor (CR71) properly connected with PCB board?

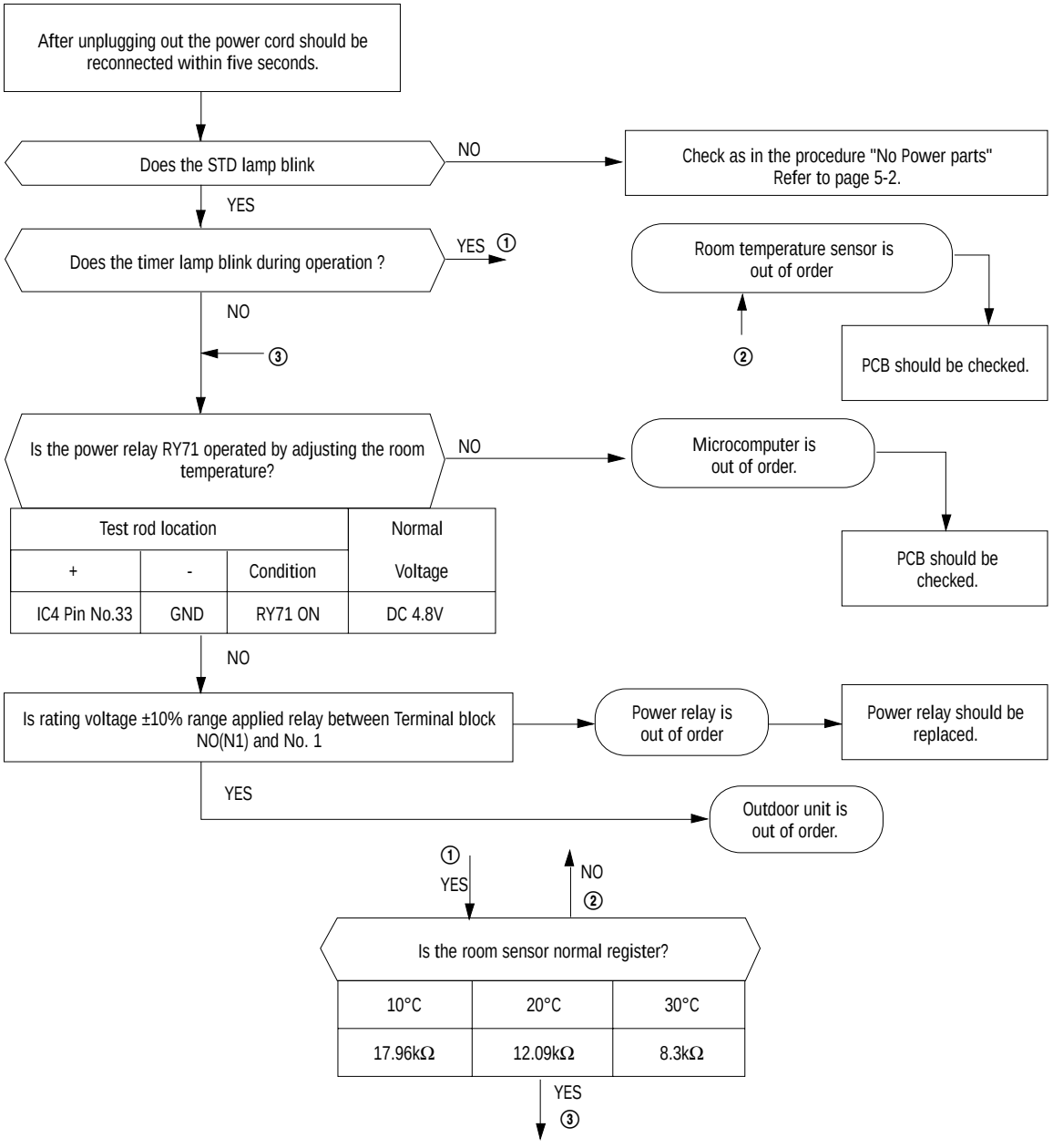
2) Troubleshooting procedure



5-2-3 When the Outdoor Unit Does Not Operate. (Initial Diagnosis)

1) Checklist :
   (1) Is input voltage normal?
   (2) Is the set temperature of the remote control higher than room temperature in COOL mode?
   (3) Is the POWER IN connector (CN71) linked correctly?
   (4) Is the outdoor unit properly connected with the TERMINAL BLOCK connector((N1), 1)?

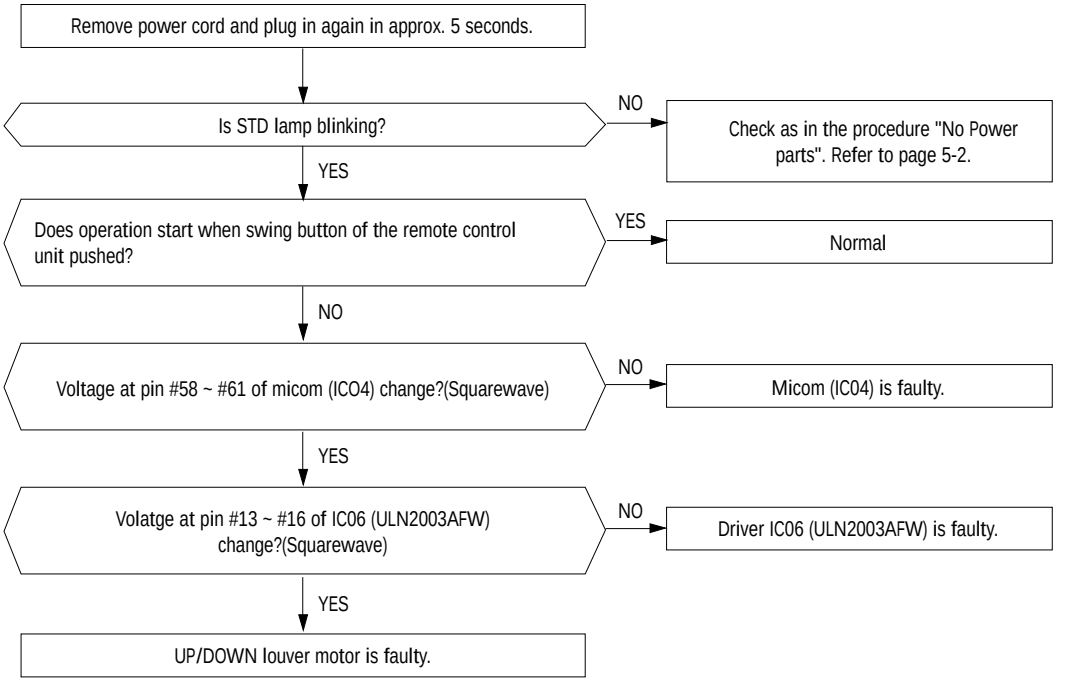
2) Troubleshooting procedure



5-2-4 When the UP/DOWN Louver Moter Does Not Operate. (Initial Diagnosis)

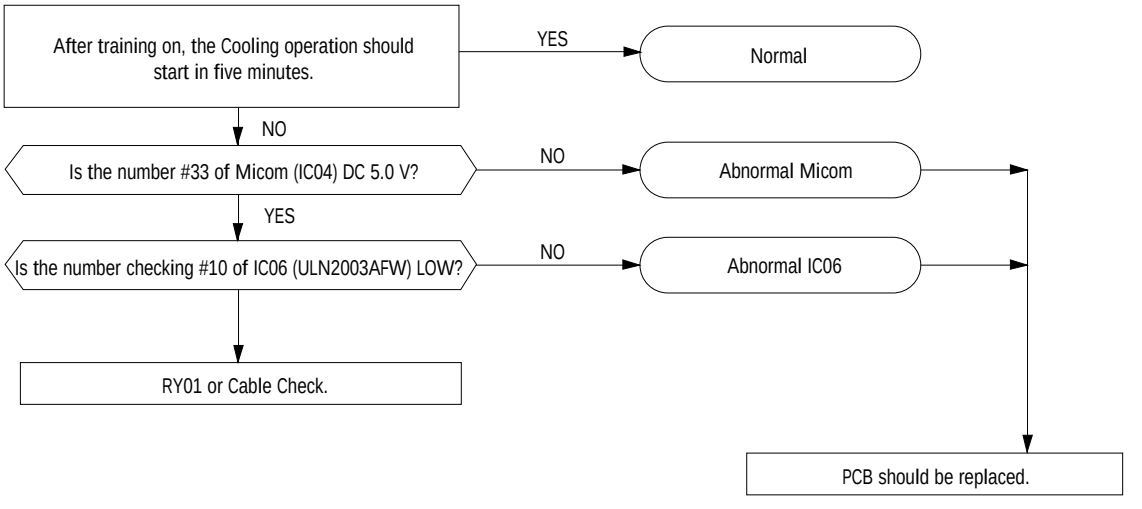
1) Checklist :
   (1) Is input voltage normal?
   (2) Is the UP/DOWN louver motor properly connected with the connector (CN61)?

2) Troubleshooting procedure


Remove power cord and plug in again in approx. 5 seconds.
Is STD lamp blinking?
NO
Check as in the procedure "No Power parts". Refer to page 5-2.
YES
Does operation start when swing button of the remote control unit pushed?
YES
Normal
NO
Voltage at pin #58 ~ #61 of micom (ICO4) change?(Squarewave)
NO
Micom (IC04) is faulty.
YES
Volatge at pin #13 ~ #16 of IC06 (ULN2003AFW) change?(Squarewave)
NO
Driver IC06 (ULN2003AFW) is faulty.
YES
UP/DOWN louver motor is faulty.

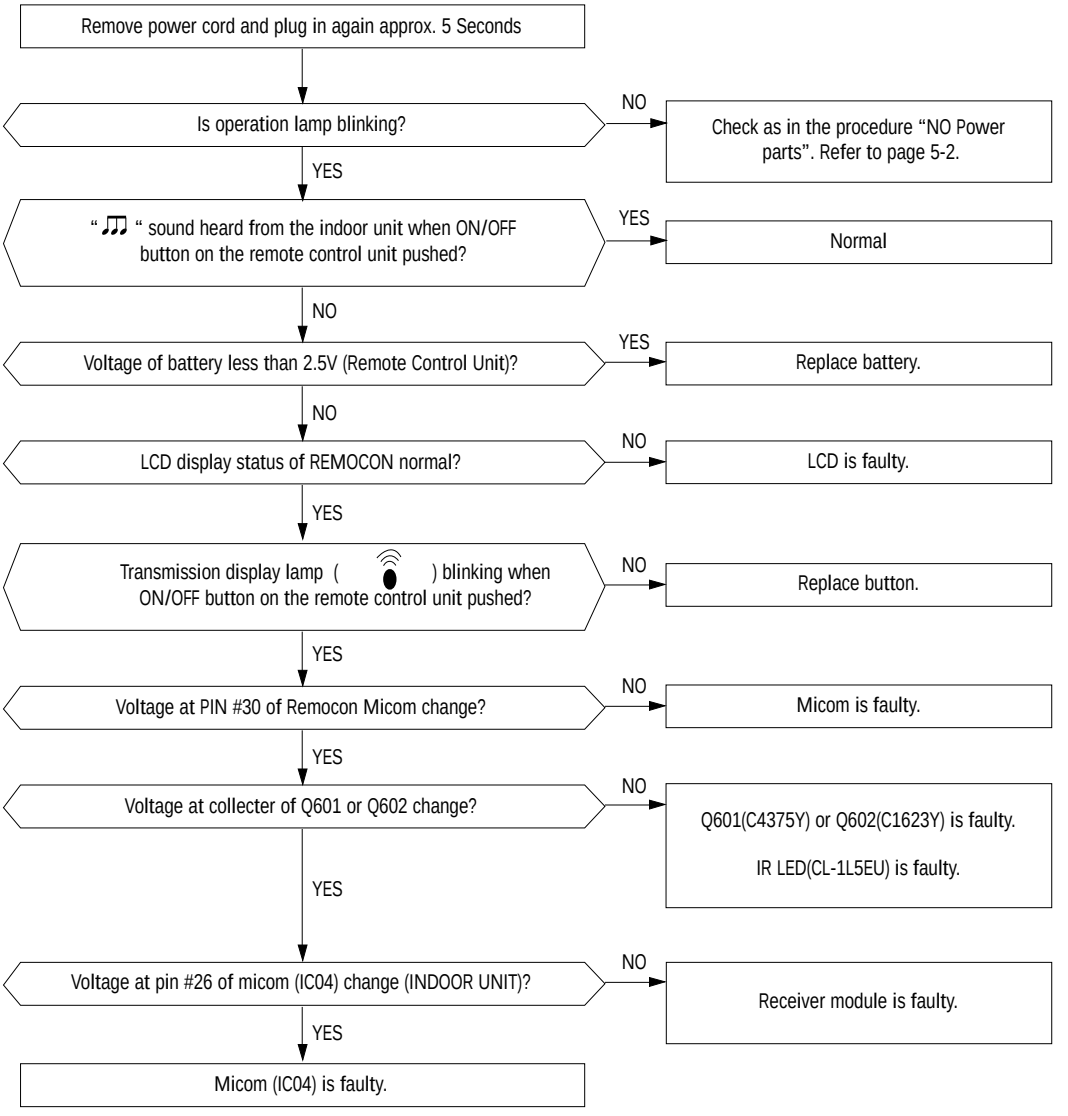
5-2-5 In the mode, When there is no cool air current. Check this first;

(1) Is the set temperature of Remote Control lower than room temperature in Cool mode?
(2) Is the Indoor PCB properly connected with the CN71 connector?



5-2-6 If Operation By Remote Control Unit Is Impossible. (Initial Diagnosis)

1) Troubleshooting procedure


Remove power cord and plug in again approx. 5 Seconds
Is operation lamp blinking?
NO
Check as in the procedure "NO Power parts". Refer to page 5-2.
YES
" ♫ " sound heard from the indoor unit when ON/OFF button on the remote control unit pushed?
YES
Normal
NO
Voltage of battery less than 2.5V (Remote Control Unit)?
YES
Replace battery.
NO
LCD display status of REMOCON normal?
NO
LCD is faulty.
YES
Transmission display lamp ( ) blinking when ON/OFF button on the remote control unit pushed?
NO
Replace button.
YES
Voltage at PIN #30 of Remocon Micom change?
NO
Micom is faulty.
YES
Voltage at collecter of Q601 or Q602 change?
NO
Q601(C4375Y) or Q602(C1623Y) is faulty.
IR LED(CL-1L5EU) is faulty.
YES
Voltage at pin #26 of micom (IC04) change (INDOOR UNIT)?
NO
Receiver module is faulty.
YES
Micom (IC04) is faulty.

5-3 PCB Inspection

5-3-1 Cautions for Part Replacement

1. The human body carries much static electricity. Before touching a part for repair, replacement or the similar purpose, be sure to touch a grounded metallic portion by hand to let the static electricity go through the metallic portion to the earth. Especially when handling any micro computer or IC, carefully remove such static electricity before touching them.

2. When repairing any part on a work bench, be sure to place an insulative sheet on the bench and always keep the sheet surface neat without any metal fragments. If any such fragment touches a part, a secondary trouble will possibly be caused in the part.

3. Before replacing any parts, be sure to turn off the power supply. If such replacement is done with the power supply kept on, an electric shock, short circuit or destruction of a part may result.

4. During replacement or repair of a part, carefully handle it : The printed circuit board has fine lead wires (jumper wires) and glass-made parts (diode) on its substrate. So if a circuit board is roughly handled, such lead wires and parts will be easily broken or damaged by bending or shock.

5. When soldering the lead wires of any new part, be sure to polish them using an emery paper or the like before solding them. Since the lead wires of any new part are covered with an oxide film, solder cannot adhere to the lead wires if not polished.

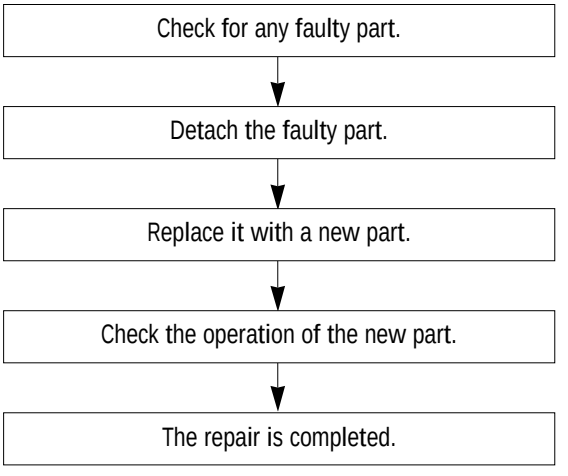
6. When soldering any part, care should be exercised not to apply any high-wattage soldering iron to the part for a long time. Some parts are of so low a heat resistance that they may be broken or have the properties changed if a soldering iron is so applied (Otherwise, the pattern may possibly be separated and raised).

7. The heat of the soldering iron should be transfered to the entire object to be soldered. If the solder pieces are not well fused due to insufficient transfer of the heat from the soldering iron, no satisfactory electrical continuity can be assured even if the soldered objects appear well connected to each other.

8. The solder used should be limited to a minimum. If excessive solder is used, it will cause inter-pattern contact, which may cause malfunction of the circuit.

5-3-2 Procedure

The parts should be replaced in the following procedure.


Check for any faulty part.
Detach the faulty part.
Replace it with a new part.
Check the operation of the new part.
The repair is completed.

5-3-3 Detailed Procedure

No.	Malfunction	Checking point (symptoms)	Causes
1	Pull out the power plug from the AC terminal and confirm the fuse on the PCB assembly	1. Is the broken(open)?	▻ Voltage over ▻ Indoor unit fan motor short-circuit
2	Turn the power on.	Voltage check	SMPS circuit is faulty
		1. AC voltage at BD71(~,~)? : rating voltage ± 10% range	▻ SMPS circuit is faulty
		2. DC voltage at BD71(+,-)? : about 325[v] ± 10%	
		3. DC voltage at IC02 : IN-GND ➔ DC12[v] : OUT-GND ➔ DC5[v]	
		4. Voltage waveform at Q201 : collector-GND ➔ squarewave	▻ PC02, R202-R205
3	Set the TURBO mode	Voltage check	SMPS circuit is faulty
		1. check voltage of IC06 (pin#10,pin#8) : relay on ➔ 0.7[v] : relay off ➔ 12[v]	▻ IC06 is faulty
		2. Voltage at terminal block ((N1) -1) ➔ rating voltage	▻ RY71 is faulty

5-4 Fault Diagnosis of Major Parts

<table>
<tr><th>Parts</th><th colspan="2">Diagnosis</th></tr>
<tr><td rowspan="3">Temp.Sensor

Heat ex. Sensor</td><td colspan="2">Measure resistance with a tester.</td></tr>
<tr><td>Normal</td><td>
<table>
<tr><td>Ambient temperature</td><td>15°C</td><td>20°C</td><td>25°C</td><td>30°C</td><td>35°C</td><td>40°C</td></tr>
<tr><td>Resistance of thermistor[KΩ]</td><td>14.68</td><td>12.09</td><td>10</td><td>8.31</td><td>6.94</td><td>5.83</td></tr>
</table>
</td></tr>
<tr><td>Abnormal</td><td>∞, OΩ … open or short</td></tr>
<tr><td rowspan="3">Indoor Fan Motor</td><td colspan="2">Measure resistance between terminals (CN72) with a tester</td></tr>
<tr><td>Normal</td><td>At ambient temperature (10°C ~ 30°C)
<table>
<tr><td colspan="2" rowspan="2">Between</td><td>Newmotech</td><td>Wellng</td><td>Jingjiang Tianma</td></tr>
<tr><td>PFS022WTVA</td><td>RPG21C</td><td>YFNPG22-4</td></tr>
<tr><td>Blue, Yellow</td><td>Main</td><td>410Ω ±10%</td><td>350Ω ±10%</td><td>370Ω ±10%</td></tr>
<tr><td>Blue, Red</td><td>Sub</td><td>325Ω ±10%</td><td>270Ω ±10%</td><td>300Ω ±10%</td></tr>
<tr><td colspan="2">Out Power</td><td colspan="2">15W</td></tr>
</table>
</td></tr>
<tr><td>Abnormal</td><td>∞, OΩ … open or short</td></tr>
<tr><td rowspan="3">Outdoor Fan Motor</td><td colspan="2">Measure the voltage between ground and signal wire of the fan motor</td></tr>
<tr><td>Normal</td><td>
<table>
<tr><td>between</td><td>Voltage</td></tr>
<tr><td>Gray, Orange</td><td>0.5V~4.5V</td></tr>
<tr><td>Yellow, Orange</td><td>5V</td></tr>
</table>
</td></tr>
<tr><td>Abnormal</td><td>Abnormal if voltage does not change from 0V to 5V.</td></tr>
<tr><td rowspan="3">Stepping Motor

(UP/DOWN swing motor)</td><td>Normal</td><td>At ambient temperature (10°C ~ 30°C)
<table>
<tr><td colspan="2" rowspan="2">Between</td><td>Newmotech</td><td>Wellng</td><td>SUNGSHIN</td></tr>
<tr><td>ASS020WTVA</td><td>YDK25-6W</td><td>IC-9625SLC7C</td></tr>
<tr><td>Blue, Yellow</td><td>Main</td><td>270Ω ±10%</td><td>275Ω ±10%</td><td>250Ω ±10%</td></tr>
<tr><td>Blue, Red</td><td>Sub</td><td>350Ω ±10%</td><td>340Ω ±10%</td><td>340Ω ±10%</td></tr>
<tr><td colspan="2">Out Power</td><td colspan="2">25W</td></tr>
</table>
</td></tr>
<tr><td>Abnormal</td><td>∞, OΩ … open or short</td></tr>
<tr><td rowspan="3"></td><td colspan="2">Measure resistance between red wire and each terminal.</td></tr>
<tr><td>Normal</td><td>Approx. 300Ω at ambient temperature (20°C ~30°C)</td></tr>
<tr><td>Abnormal</td><td>∞, OΩ … open or short</td></tr>
</table>

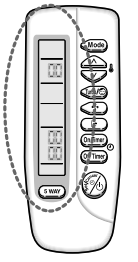
5-5 Set up the Model option

The Method for Setting up the model option with remocon

- **It is necessary to set up option code after replacing the main-PCB as a service parts.**
  Make sure that you can set up the option of code the remote controller after you replace the main PBA otherwise, the unit won't be working properly and all LED lamps on display will be flickering.

Step 1 : Preparing the remocon to main PCB option set

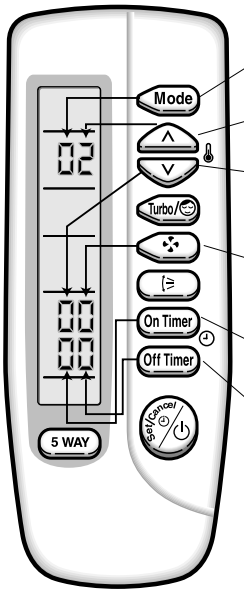
1st Remove the battery from the remocon.
2nd Press the temperature raise/down button simultaneously and insert the battery again.
3rd Make sure the remocon display shown as 00 00 00.



Step 2 : Second stage preparation of the remocon option set.

✵ **Note** ; In case the wrong letter has been selected, continue to press the button until the correct letter appears.

1st If the first stage number "0" appears on the display, proceed to the second stage.
2nd Every time the ① and ⑦ button, "0" and "1" each continue to appear.
3rd Whenever pressing the ②, ③, ④, ⑤, ⑥, ⑧, ⑨, ⑩, ⑪, ⑫ button, the number increase from 0~9(0123456789) and A, b, C, d, E, F each time.



① If the first number is 0, it is correct otherwise press Mode until 0 appear.

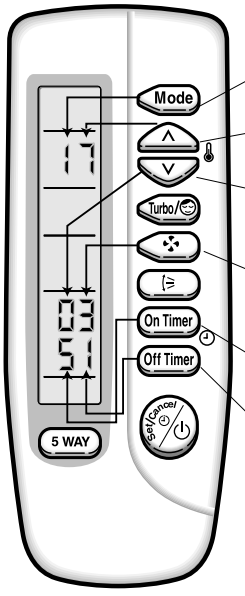
② When pressing the ∧ button 0 ~ F appear on the display, select one of them.

③ When pressing the ∨ button 0 ~ F appear on the display, select one of them.

④ When pressing the fan button 0 ~ F appear on the display, select one of them.

⑤ When pressing the On Timer button 0 ~ F appear on the display, select one of them.

⑥ When pressing the Off Timer button 0 ~ F appear on the display, select one of them.



① If the first number is 1, it is correct otherwise press Mode until 1 appear.

② When pressing the ∧ button 0~F appear on the display, select one of them.

③ When pressing the ∨ button 0~F appear on the display, select one of them.

④ When pressing the Turbo/ button 0~F appear on the display, select one of them.

⑤ When pressing the On Timer button 0~F appear on the display, select one of them.

⑥ When pressing the Off Timer button 0~F appear on the display, select one of them.

Step 3 : Reconfirming option set after completion

(in case of ex. 020000-170351)

After pressing Mode selector for the 0 mode, the display shown as 02 00 00 .
After pressing Mode selector for the 1 mode, the display shown as 17 03 51 .

Step 4 : Pressing the ON/OFF button (⏻)

When pressing the operation ON/OFF key with the direction of remote controller for unit, the sound "Ding" or "Diriring" is heard and the first LED lamp on the left side is flickering at the same time, then the input of option is completed. (If the diriring sound isn't heard, try again pressing the ON/OFF button.)

Step 5 : Unit operation test-run

First, Remove the battery from the remote controller.
Second, Re-insert the battery into the remote controller.
Third, Press ON/OFF key with the direction of remote controller for set.

• Error Mode

1st If all lamps of indoor unit are flickering, Plug out and plug in again and pressing ON/OFF key to retry.

2nd If the unit is not working properly or all lamps are continuously flickering after setting the option code, see if the correct option code is set up for it's model.

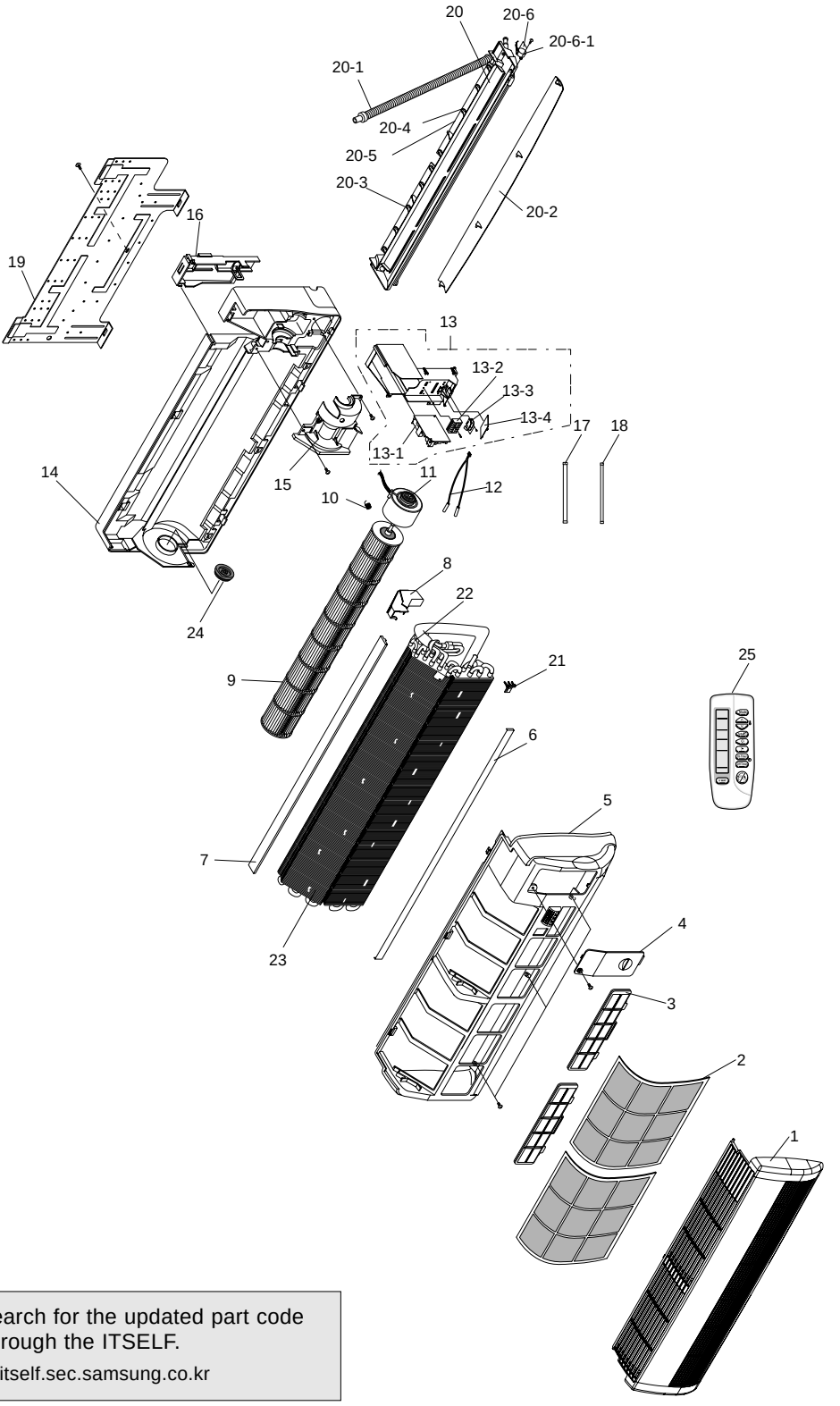
<Table of the option code>

MODEL	OPTION CODE
ASA12CAME SC12ACA	030000-170340
ASA12CBME SC12ACB	020000-170340
ASA09CAME SC09ACA	030000-1700Fb
ASA09CBME SC09ACB	020000-1700Fb
ASA07C5ME SC07AC5	030000-1700C8
ASA07C6ME SC07AC6	020000-1700C8

MEMO

6. Exploded Views and Parts List

6-1 Indoor Unit



You can search for the updated part code number through the ITSELF.

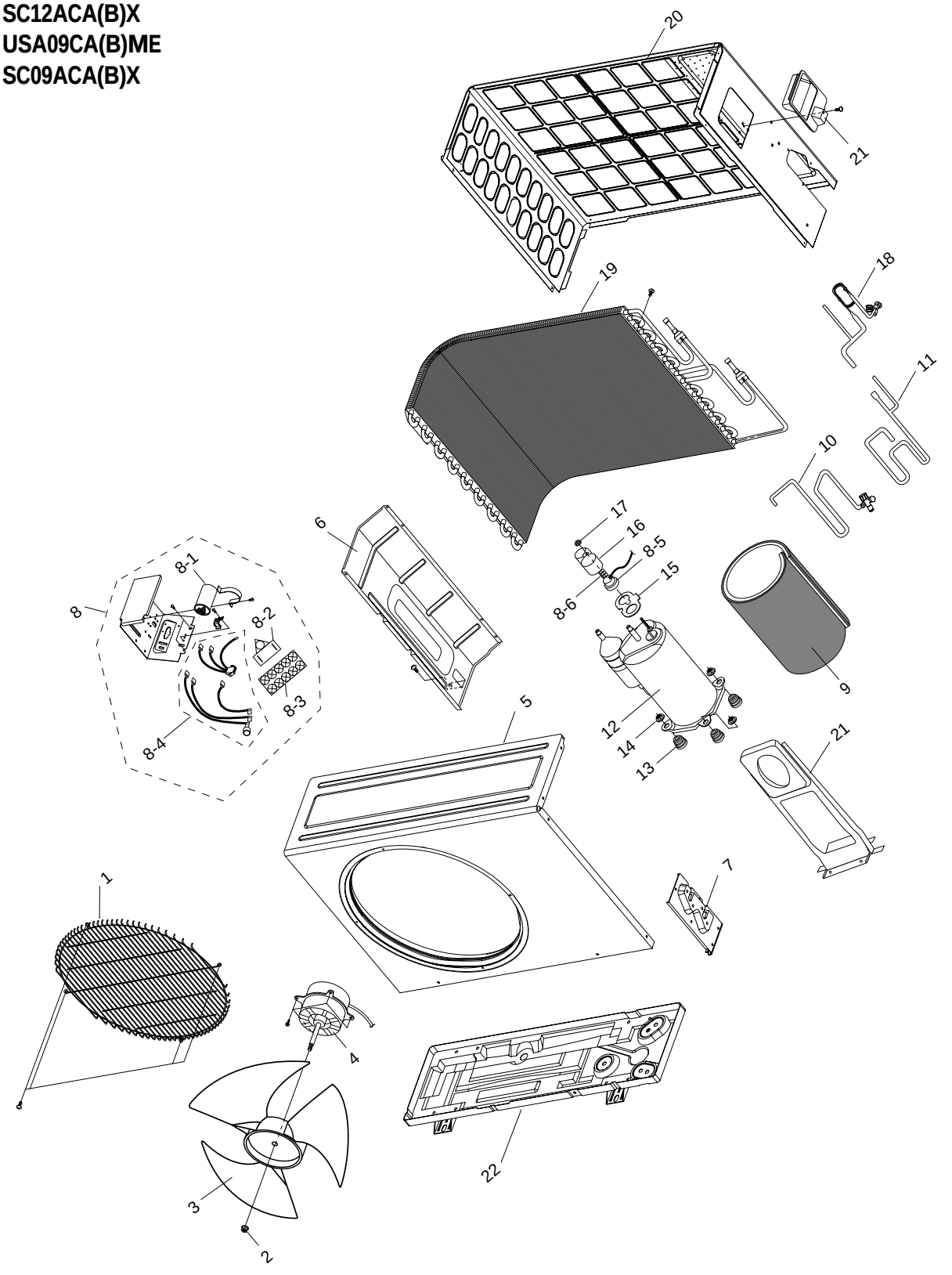
URL : http://itself.sec.samsung.co.kr

■ Parts List

No.	CODE NO	Description	Q'TY			Remark
			ASA12CA(B)ME SC12ACA(B)	ASA09CA(B)ME SC09ACA(B)	ASA07C5(6)ME SC07AC5(6)	
1	DB64-00354A	GRILLE AIR INLET	1	1	1	
2	DB63-00064A	GUARD-AIR FILTER	2	2	2	
3	DB95-00287G	FILTER CLEANER ASS´Y	1	1	1	
4	DB63-00067A	COVER TEMINAL	1	1	1	
5	DB92-00248A	ASS´Y PANEL	1	1	1	
6	DB67-00051A	SPACER EVAP LOW	1	1	1	
7	DB67-00032A	SPACER EVAP UP	1	1	1	
8	DB63-00083A	COVER U BEND	1	1	1	
9	DB94-00040F	ASS´Y FAN CROSS(SF)	1	1	1	
10	DB60-20011A	BOLT SPECIAL	1	1	1	
11	DB31-00033A	MOTOR FAN IN	1	1	1	
12	DB32-00020A	THERMISTOR WIRE ASS´Y	1	1	1	
13	DB93-00458D	ASS´Y CONTROL IN	1	1	1	
13-1	DB93-01018A	ASS´Y PCB MAIN	1	1	1	
13-1-1	1103-001175	IC EPROM	1	1	1	
13-1-2	1203-001813	IC PWM CONTROLLER	1	1	1	
13-1-3	3502-000115	SSR	1	1	1	
13-2	DB65-00079A	TERMINAL BLOCK ASS´Y	1	1	1	
13-3	DB61-00171A	HOLDER WIRE CLAMP	1	1	1	
13-4	DB93-00927A	ASS´Y PCB MODULE	1	1	1	
13-4-1	2202-000780	C CERAMIC,MLC-AXIAL	1	1	1	
13-4-2	DB32-00037A	MODULE REMOCON	1	1	1	
14	DB94-00056G	ASS´Y BACK BODY(RIGHT SIDE)	1	1	1	
15	DB61-00162A	HOLDER MOTOR	1	1	1	
16	DB61-00165A	HOLDER PIPE	1	1	1	
17	DB39-00146A	CONNECT WIRE DISPLAY	1	1	1	
18	DB39-00147A	CONNECT WIRE PCB	1	1	1	
19	DB70-00036A	PLATE HANGER	1	1	1	
20	DB94-00058L	ASS´Y TRAY DRAIN(RIGHT SIDE)	1	1	1	
20-1	DB94-00062E	ASS´Y DRAIN HOSE	1	1	1	
20-2	DB66-00127B	BLADE H	1	1	1	
20-3	DB66-00128A	BLADE V,A	3	3	3	
20-4	DB66-00128B	BLADE V,B	6	6	6	
20-5	DB63-00082A	SCREEN SAFETY WIRE	1	1	1	
20-6	DB95-20138A	ASS´Y MOTOR STEPPING	1	1	1	
20-6-1	DB31-10129A	MOTOR STEPPING	1	1	1	
20-7	DB93-00859A	ASS´Y CENTER DISPLAY	1	1	1	
21	DB61-40251A	HOLDER SENSOR	1	1	1	
22	DB67-60030A	SPRING SENSOR	1	1	1	
23	DB96-01464A	EVAPORATOR ASS´Y	1	1	1	
24	DB94-40003A	RUBBER BEARING	1	1	1	
25	DB93-00251K	ASS´Y REMOCON	1	1	1	

6-2 Outdoor Unit

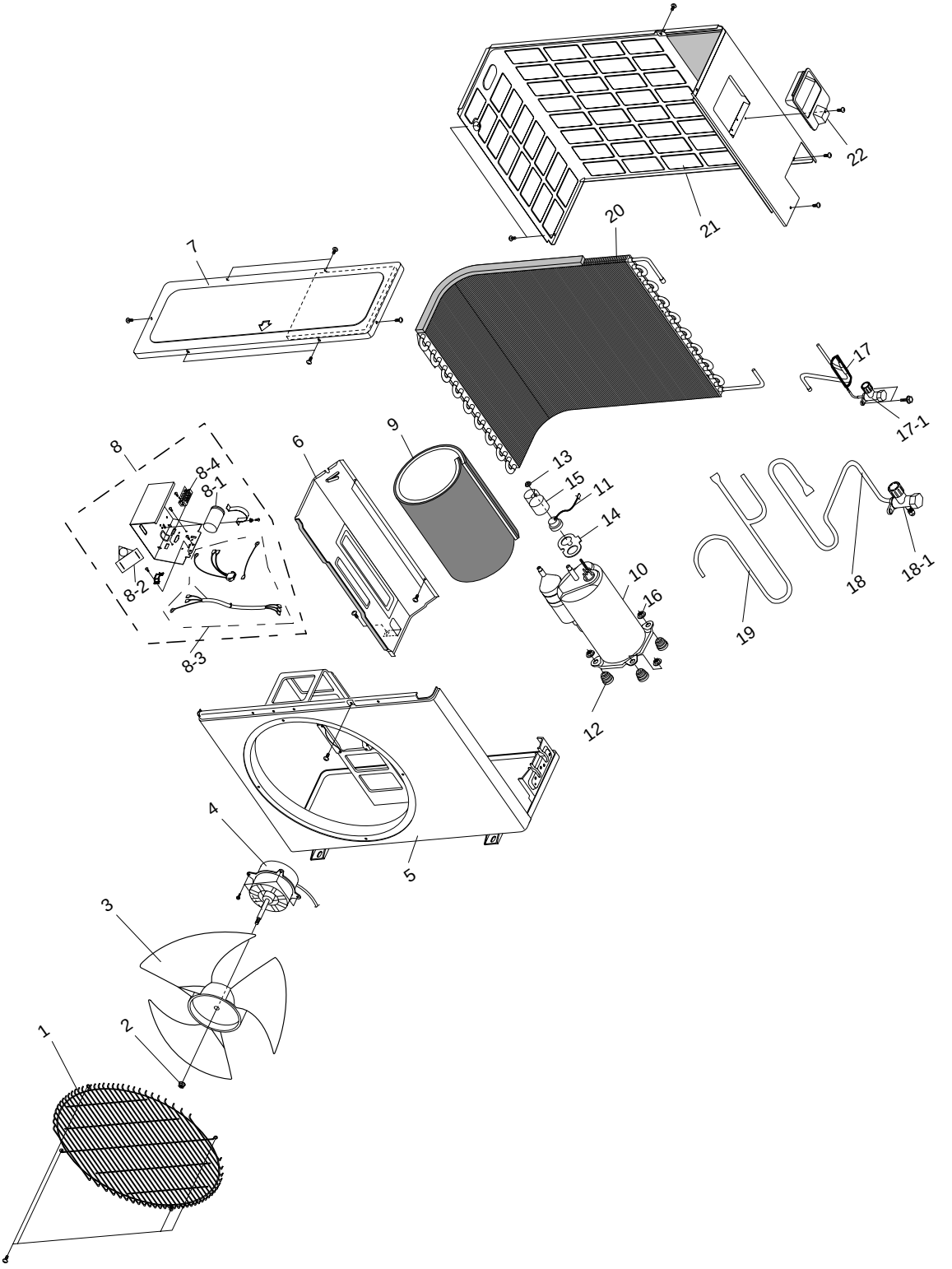
- **USA12CA(B)ME**
- **SC12ACA(B)X**
- **USA09CA(B)ME**
- **SC09ACA(B)X**



■ Parts List (OUTDOOR UNIT)

No.	CODE NO	Description	Specification	Q'TY		Remark
				USA12CAME SC12ACAX	USA09CAME SC09ACAX	
1	DB63-00071A	GUARD FAN	HSER	1	1	
2	DB60-30020A	NUT FLANGE	2C SM20C M6 NTR	1	1	
3	DB67-50063A	PROPELLER-FAN	AS+G/F, ø405	1	1	
4	DB31-10058C	MOTOR FAN OUT	220/240V 60/50HZ	1	1	
5	DB90-00633F	ASS´Y CABI FRONT	ASS'Y	1	1	
6	DB94-00163B	ASS´Y PARTITION	ASS'Y	-	1	
	DB94-00163A	ASS´Y PARTITION	ASS'Y	1	-	
7	DB64-00887A	BRAKET V/V	SECC-P, T1.6	1	1	
8	DB93-00477R	ASS´Y CONTROL OUT	ASS'Y	-	1	
	DB93-00477Q	ASS´Y CONTROL OUT	ASS'Y	1	-	
8-1	2501-001237	CAPACITOR COMP	35µF 450VAC	1	1	
8-2	2301-001377	CAPACITOR MOTOR	1.2µF 450VAC	-	1	
	2301-001375	CAPACITOR MOTOR	1.5µF 450VAC	1	-	
8-3	DB65-40049E	TERMINAL BLOCK	4P DFT-20A	1	1	
8-4	DB93-00481A	ASS´Y LEAD WIRE	ASS'Y	1	1	
8-5	DB35-00015W	O L P	RAC12131-9622	-	1	
	DB35-00015V	O L P	RAC12128-9922	1	-	
8-6	DB67-60020A	O L P SPRING	STS304	1	1	
9	DB72-00683A	CLOTH COMP	T10.0, 580, 255	1	-	
	DB72-00689B	CLOTH COMP	T10.0	-	1	
10	DB62-01074A	ASS´Y SUCTION	ASS´Y	-	1	
	DB62-01069A	ASS´Y SUCTION	ASS'Y	1	-	
11	DB62-01068A	ASS´Y DISCHARGE	ASS'Y	1	-	
	DB62-01073A	ASS´Y DISCHARGE	ASS'Y	-	1	
12	G8C124JU1EL	COMPRESSOR	220V-240V/50Hz	1	-	
	G4A097JU1EP	COMPRESSOR	220V-240V/50Hz	-	1	
13	DB73-00067A	GROMMET-ISOLATOR	SILICON	3	3	
14	DB60-30028A	NUT-WASHER	HEX 2C MB ZPC	3	3	
15	DB63-20002A	GASKET	EPDM	1	1	
16	DB63-10165D	COVER TERMINAL	PBT	1	1	
17	DB60-30018A	NUT-FLANGE	M5, SM20C	1	1	
18	DB96-01457G	ASS´Y-CAPILLARY	ASS'Y(1.5 x 800)	1	-	
	DB96-01457H	ASS´Y-CAPILLARY	ASS'Y(1.42 x 700)	-	1	
19	DB96-01620A	ASS´Y COND	ASS'Y(SF)	-	1	
	DB96-01533A	ASS´Y COND	ASS'Y	1	-	
20	DB90-00634A	CABINET SIDE	ASS'Y(BENDING)	1	1	
21	DB63-10443C	HANDLE CABI, RH	ABS	1	1	
22	DB90-00635B	ASS´Y BASE OUT	ASS´Y	1	-	
	DB90-00635A	ASS´Y BASE OUT	ASS´Y	-	1	

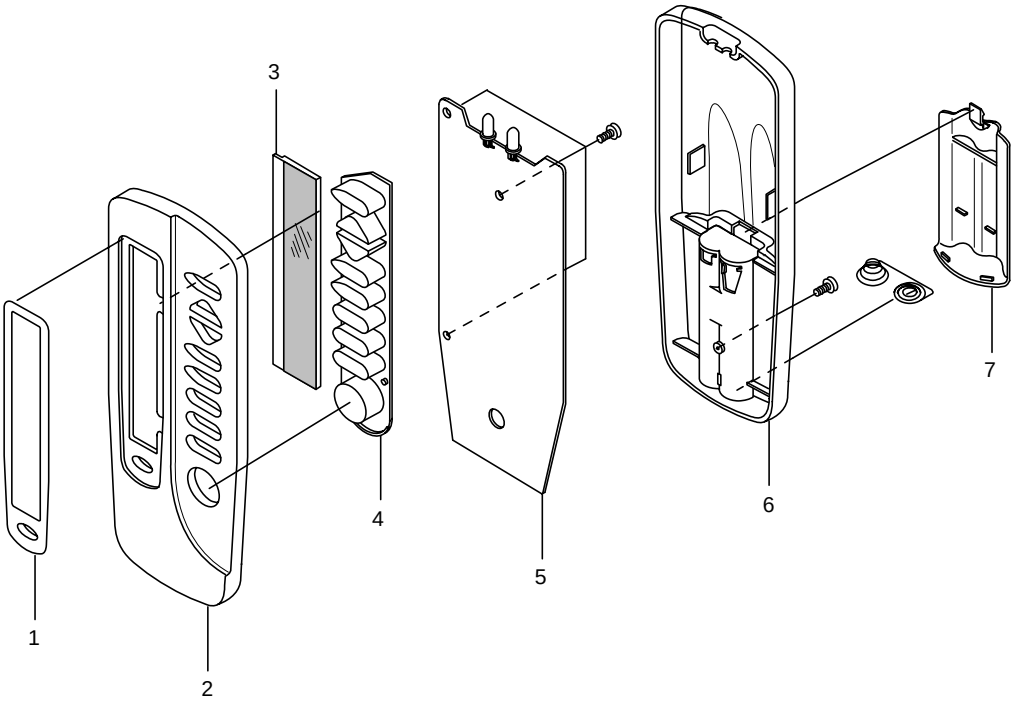
- **USA07C5(6)ME**
- **SC07AC5(6)X**



■ Parts List

No.	CODE NO	Description	Specitication	Q'TY
				USA07C5(6)ME UC07AC5(6)X
1	DB63-00086B	GUARD-FAN	HSWR, IP2, 5&3, SC-90073T, 375FAN	1
2	DB60-30004A	NUT-FLALNGE	2C, M6, SM20C, NTR	1
3	DB67-00036A	FAN-PROPELLER	AS+G/F20%, PI 375, BLK	1
4	DB31-10058C	MOTOR-FAN OUT	220/240V 60/50Hz	1
5	DB90-00263F	ASS´Y FRAME	SH07AA5	1
6	DB94-00141A	ASS´Y PARTITION	ASS´Y	1
7	DB90-00077D	ASS´Y CABI-UPPER	ASS´Y	1
8	DB93-00477S	ASS´Y CONTROL OUT	ASS´Y	1
8-1	2501-001236	C-OIL (COMP)	30µF, 370VAC	1
8-2	2301-001374	C-OIL (MOTOR)	1.0µF, 450VAC	1
8-3	DB93-00481A	ASS'Y LEAD WIRE	V2 P/D (105˚C)	1
8-4	DB65-40049E	TERMINAL BLOCK	4P, (N1), 1, 2, 3, AWG16, 67.5 x 29.4	1
9	DB72-00453A	CLOTH-COMP	T8, 425, 225, 44F COMP	1
10	G4A080JU1EP	ROTARY COMP	1Ph, 50Hz	1
11	DB35-00015T	PROTECTOR O/L	RAC 12126-9622	1
12	DB73-00070A	GROMMET-ISOLATOR	NR	3
13	DB60-30018A	NUT-FLANGE	PI0.8, M5, SM20C	1
14	DB63-20002A	GASKET	EPDM, TO.8	1
15	DB63-10165D	COVER-TERMINAL	PBT	1
16	DB60-30028A	NUT-WASHER	HEX, 2C, M8, ZPC	3
17	DB62-01234D	ASS´Y TUBE CAPILLARY	ID1.42 x 900	1
17-1	DB62-40039A	VALVE-SERVICE	1/4INCH, HFC	1
18	DB62-01076A	ASS´Y -SUCTION	ASS'Y	1
18-1	DB62-00896A	VALVE-SERVICE	3/8INCH, HFC	1
19	DB62-01075A	ASS´Y -DISCHARGE	C1220T-0	1
20	DB96-01287A	ASS´Y COND	1.5 LOUVER	1
21	DB64-60171C	CABINET-SIDE	SECC-P, T 0.8, A-P/J	1
22	DB63-10169E	COVER-E, PARTS ASS'Y	SC-90073R	1

6-3-1 ASS'Y REMOCON : DB93-00251K

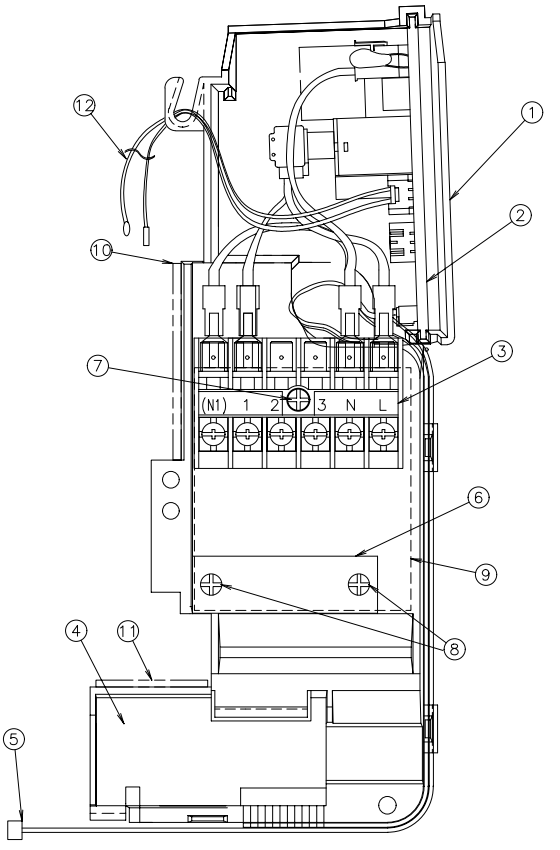


■ Parts List

No	Description	Q'TY	Remark
1	INLAY LCD	1	
2	CASE TOP	1	
3	LCD	1	
4	KEY RUBBER	1	
5	ASS'Y PCB REMOCON	1	
6	CASE LOW	1	
7	BATTERY COVER	1	

6-4 Indoor Control Unit

6-4-1 ASS'Y CONTROL-IN : DB93-00458D



■ Parts List

No	Description	Specification	Remark
1	HOLDER CONTROL	ABS	
2	ASS'Y MAIN PCB	DB93-01018A	
3	ASS'Y TERMINAL BLOCK	-	
4	ASS'Y DISPLAY PCB	DB93-00927A	
5	CONNECTOR WIRE PCB U/D	-	
6	HOLDER WIRE CLAMP	-	
7	SCREW	PH, M3 x L20	
8	SCREW	TH + M4 x L16, ZPC(YEL), SWRCH	
9	HOLDER CLAMP IN	-	
10	SEAL PANEL FRONT RH	-	
11	SEAL H/CONTROL FRONT	-	
12	ASS'Y THERMISTOR	4P(2mm PITCH), 103AT	

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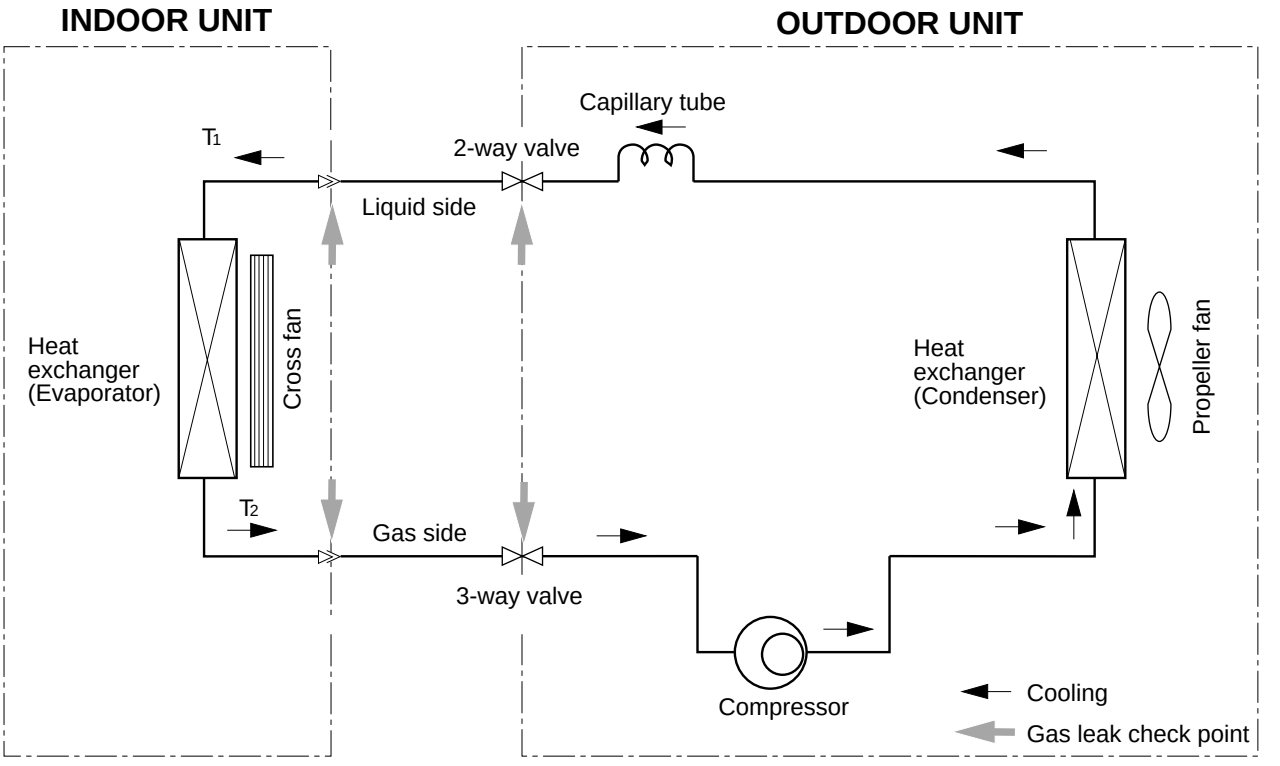
7. Block Diagrams

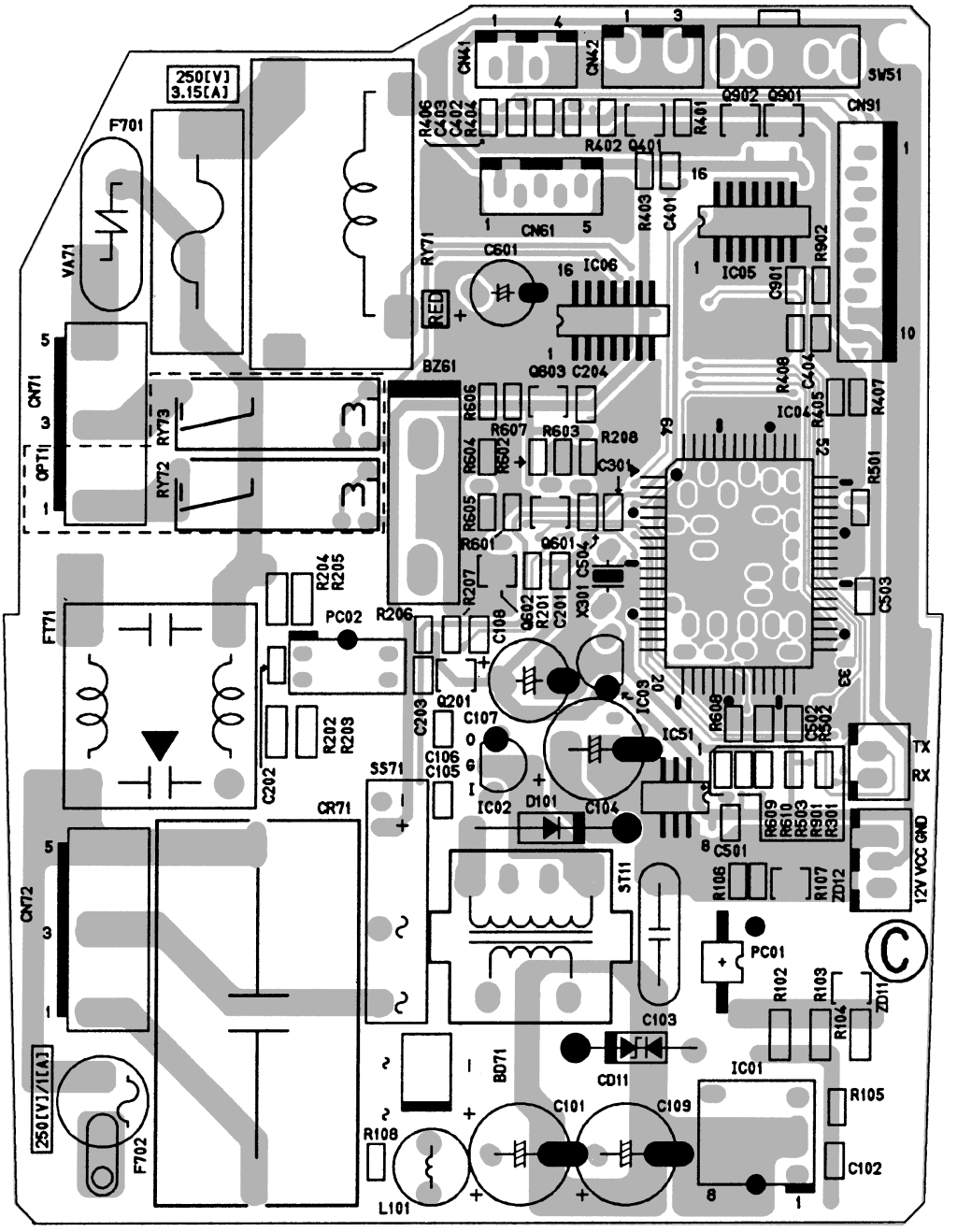
7-1 Refrigerating Cycle Block Diagram



8. PCB Diagrams

8-1 ASS'Y MAIN PCB;DB93-01018A

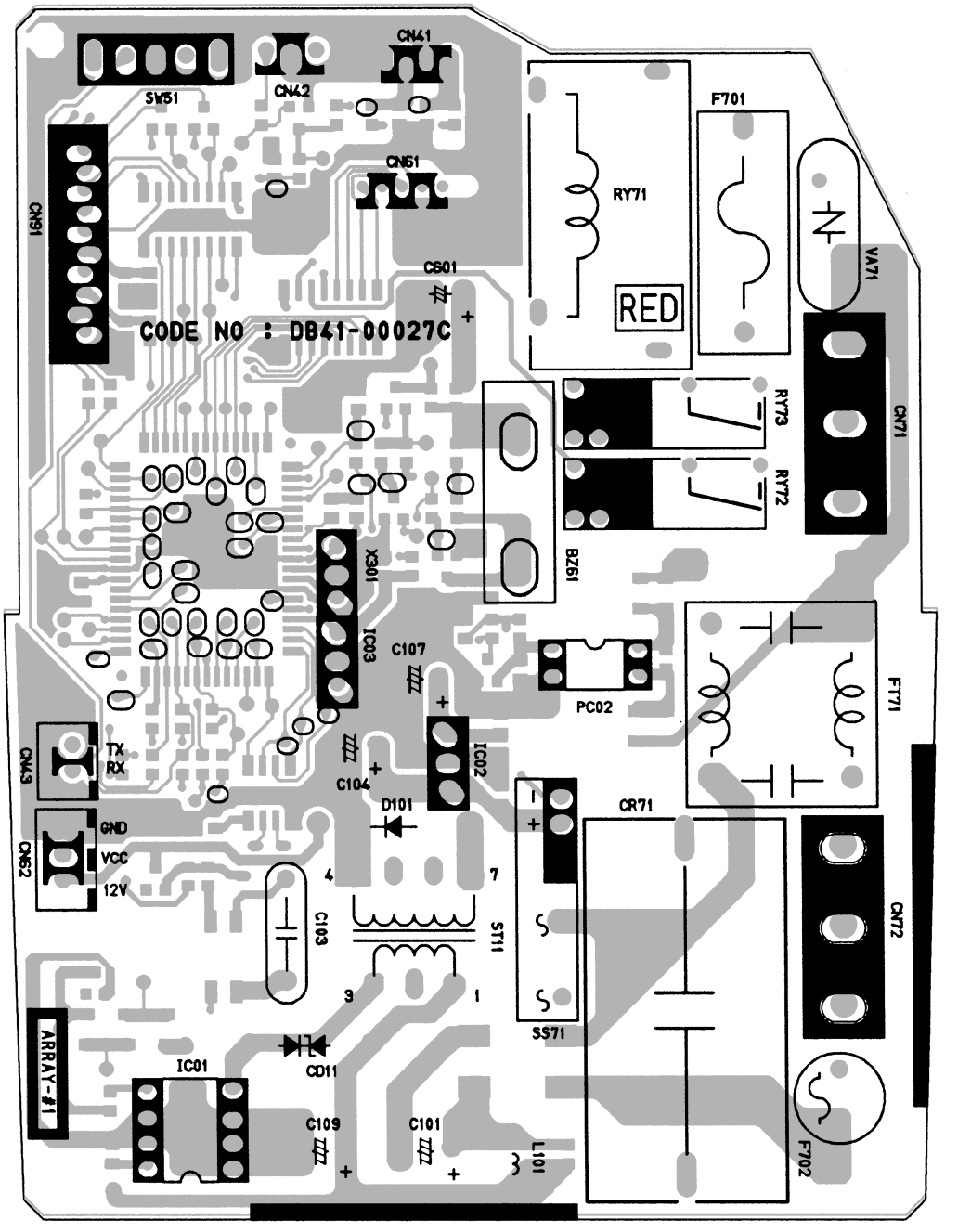
■ **TOP PATTERN**



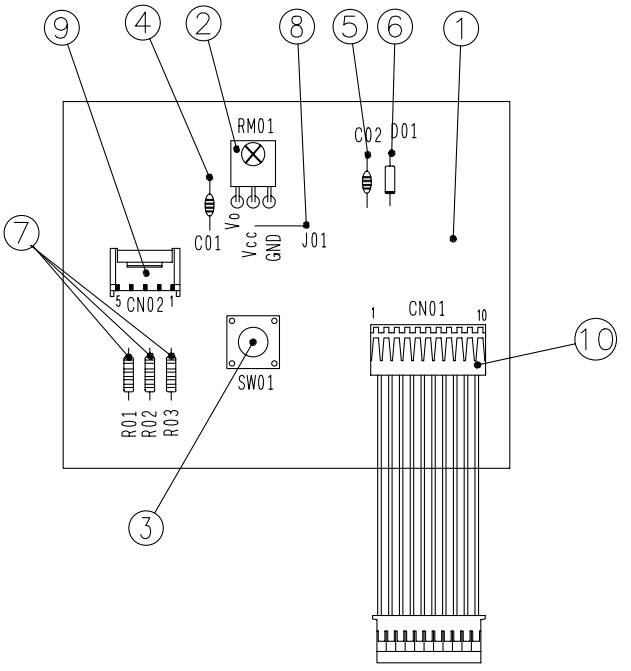
■ Parts List

No	Description	Specification	Location No.
1	PCB-MAIN	120x93	
2	IC-MCU	KS88C4632	IC04
3	IC DRIVE	ULN2003AFW	IC05, IC06
4	EEPROM	93LC56B-I/SN	IC51
5	PHOTO COUPLER	TLP181	PC01
6	TR SMALL SIGNAL	MMST2907A	Q603
7	TR SMALL SIGNAL	2SC2412K	Q201, Q401, Q601, Q602
8	TR DIGITAL	DTA114EKA	Q901, Q902
9	DIODE BRIDGE	DF06S	BD71
10	ZENER	BZX84-C11	ZD12
11	ZENER	BZX84-C3V6	ZD11
12	SSR	G3MB202PL	SS71
13	TR SWITCH	TNY255P	IC01
14	IC VOLT REGULATOR	KA78L05	IC02
15	IC	KA7533Z	IC03
16	PHOTO COUPLER	PC814	PC02
17	FR-DIODE	UG2B	D101
18	T.V.S	ST02D-200	CD11
19	VARISTOR	INR14D561K-BS	VA71
20	RESONATOR CERAM IC	10MHZ	X301
21	SW TRANS	JT1916	ST11
22	FILTER NOISE	HP1-P10 / NFP-1010	FT71
23	COIL	5mH/50mA	L101
24	RELAY POWER	UKH-12S	RY71
25	BUZZER	CBE2220BA	BZ61
26	HOLDER FUSE	FB58	F701
27	FUSE	250V, 3.15A	F701
28	FUSE	250V, 1A	F702
29	CONNECTOR HEADER	YW396-05AV WHT	CN72
30	CONNECTOR HEADER	YW396-05AV BLU	CN71
31	CONNECTOR HEADER	SMW200-10 WHT	CN91
32	CONNECTOR HEADER	SMW200-5PWHT	CN61
33	CONNECTOR HEADER	SMW300-3P WHT	CN42
34	CONNECTOR HEADER	SMW200-4P WHT	CN41
35	C-FILM	1.2µF, 450V	CR71
36	C-AL	SD 1000µF, 25	C104
37	C-AL	47µF, 50V	C601
38	C-AL	470µF, 16V	C107
39	C-ELEC	SD 6.8µF/450V	C101, C109
40	C-CERAMIC	SDE 2G 222M	C103
41	C-CHIP	CS2012Y5V104Z500NR	C102, C105, C106, C108, C201, C202, C301, C402, C403, C501, C502, C503, C504, C901
42	C-CHIP	CS2012Y5V103Z500NR	C203, C204, C401
43	C-CHIP	CS2012X7R102K500NR	C404
44	R-CHIP	MCR18EZHJ224	R102, R103, R104
45	R-CHIP	MCR18EZHJ104	R202, R203, R204, R205
46	R-CHIP	MCR10EZHF6801	R404, R406
47	R-CHIP	MCR10EZHJ103	R206, R501, R502, R503, R602, R609, R610, R902
48	R-CHIP	MCR10EZHJ682	R402
49	R-CHIP	MCR10EZHJ472	R108, R603, R901
50	R-CHIP	MCR10EZHJ102	R201, R207, R208, R301, R401, R403, R408, R601, R607, R608
51	R-CHIP	MCR10EZHJ561	R606
52	R-CHIP	MCR10EZHJ471	R105, R604, R605
53	R-CHIP	MCR10EZHJ331	R405, R407
54	R-CHIP	MCR10EZHJ221	R106, R107
55	RELAY-MINIATURE	F3AA012E	RY72, RY73

■ BOTTOM PATTERN



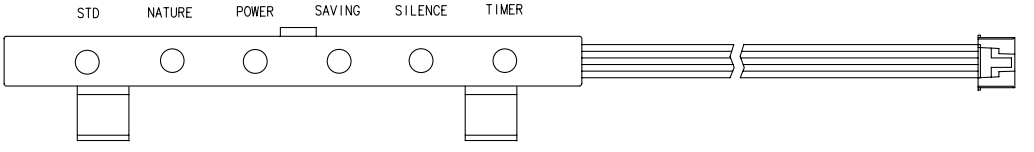
8-3 ASS'Y DISPLAY PCB;DB93-00927A



■ Parts List

No	Description	Location No.	Specification	Q'TY	Remark
1	PCB-DISPLAY		64.5x53	1	
2	MODULE REMOCON	RM01	KSM-713TH5	1	
3	TACT SWITCH	SW01	KPT-1105A	1	
4	C-CERAMIC	C01	102K	1	
5	C-CERAMIC	C02	104Z	1	
6	DIODE SWITCHING	D01	IN4148	1	
7	R-CARBON	R01, R02, R03	470 1/2W 5%	3	
8	JUMP	J01	10mm	2	
9	CONNECTOR WAFER	CN02	SMAW200-05	1	
10	CONNECTOR WIRE	CN01	UL1007, AWG#26	1	

8-4 ASS'Y CENTER DISPLAY;DB93-00859A



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9. Wiring Diagrams

9-1 Indoor Unit

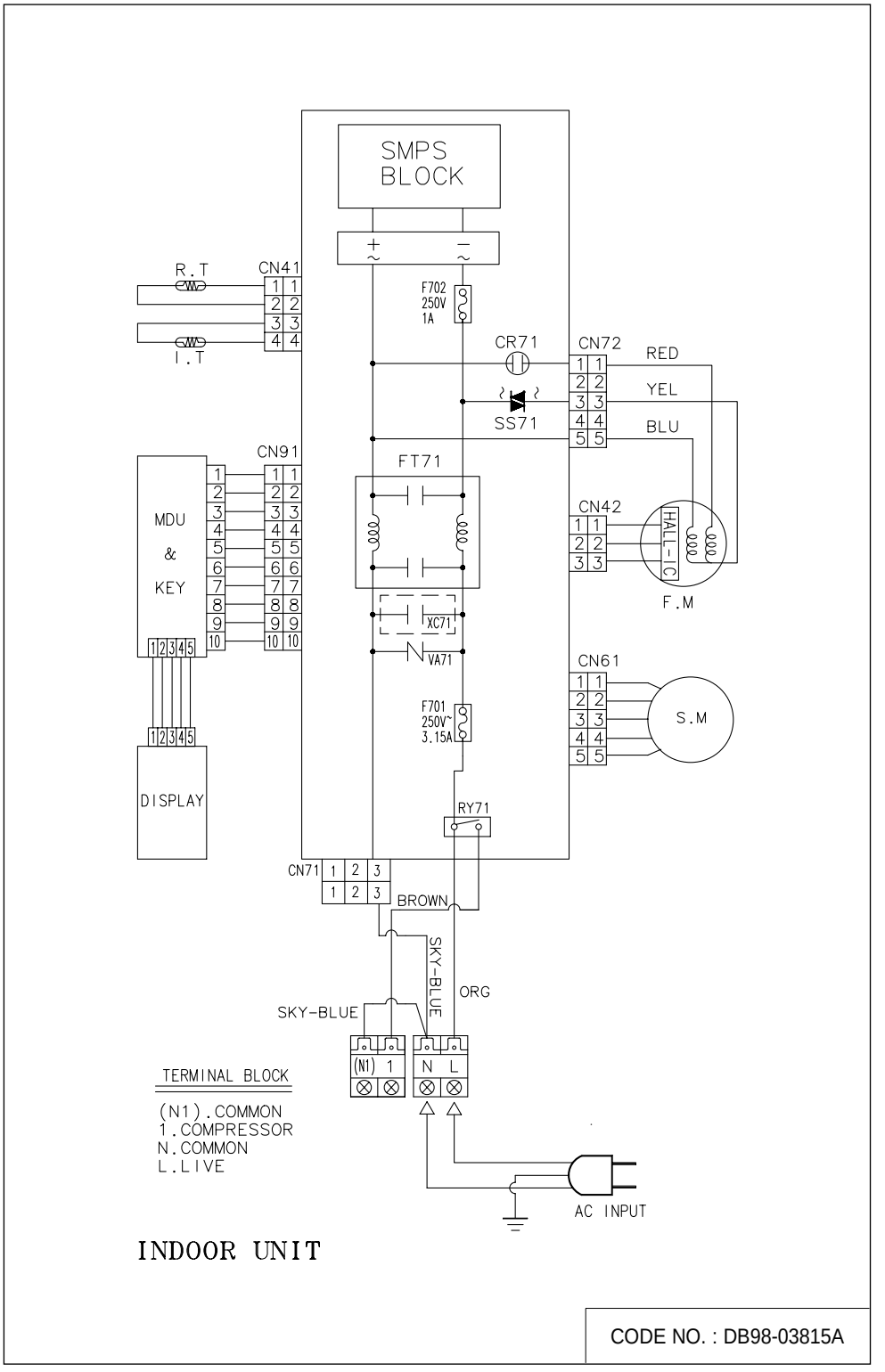
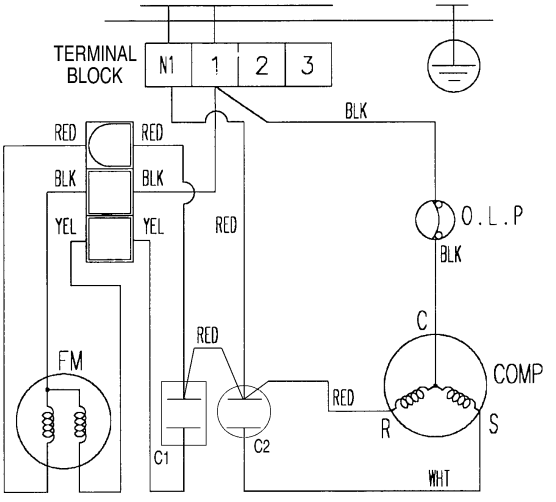


DIAGRAM-OUTDOOR



C1 : MOTOR CAPACITOR
C2 : COMP CAPACITOR

DB68-01625A

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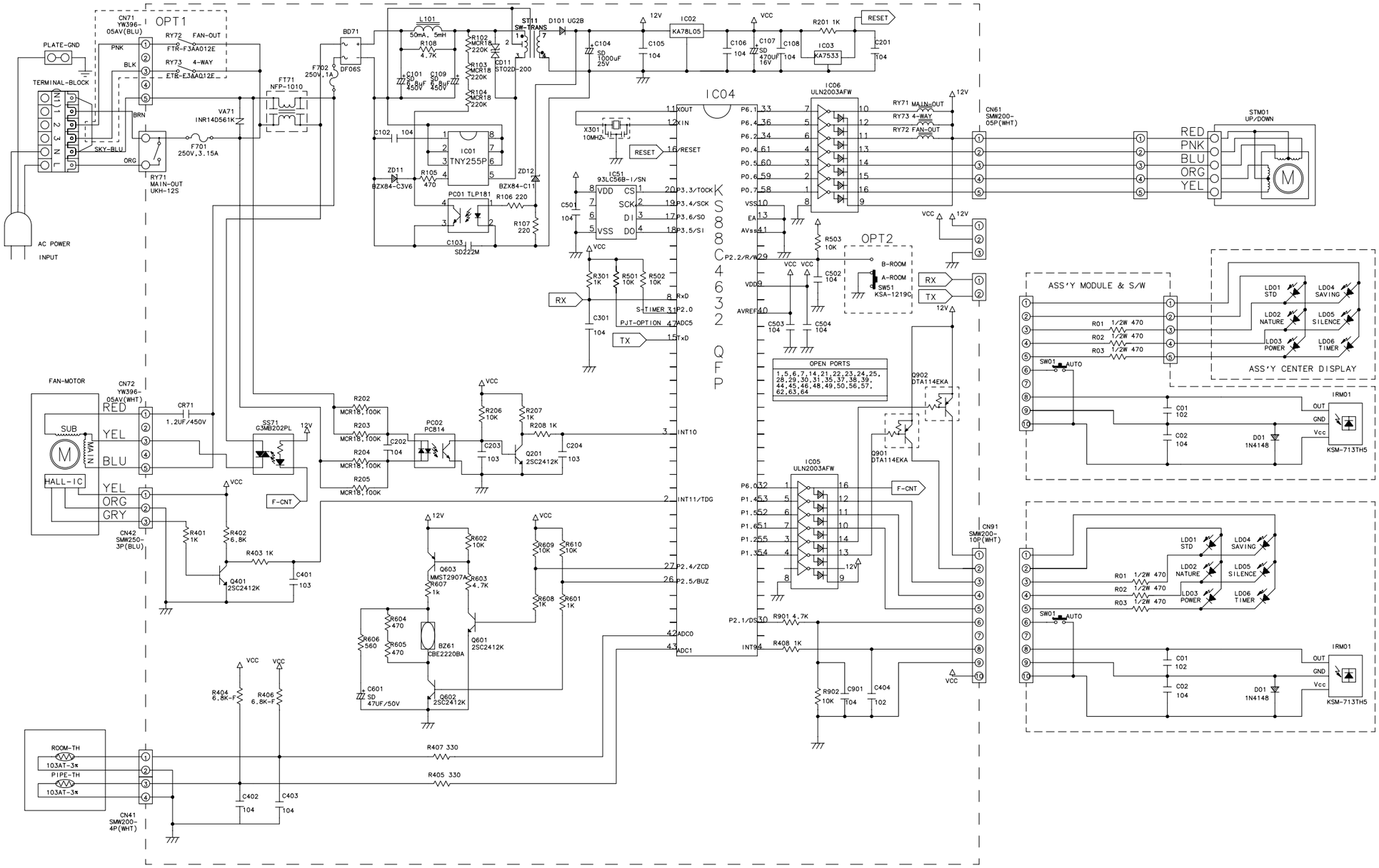
10. Schematic Diagrams

10-1 Indoor Unit



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UPDATE LOG SHEET

Application date	Page	Part#	Note(Cause & Solution)	S/Bulletin#

Use this page to keep any special servicing information. (Service Bulletin, etc.)
If only parts number changes, Just change parts number directly on parts list.
And if you need more information, please see the service website.

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